

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Claire A. CAJACOB *et al.*

Appln. No.: 09/233,218

Filed: January 20, 1999

For: Nucleic Acid Molecules and Other  
Molecules Associated with the  
Tetrapyrrole Pathway



Art Unit: 1631

Examiner: Y. Kim

Atty. Docket: 04983.0025.00US01/  
38-21(15090)B

Statement Regarding Sequence Submission

BOX SEQUENCE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

In accordance with 37 C.F.R. §§ 1.821(f) and (g), and 1.825(b), the paper copy of the substitute Sequence Listing and the computer readable copy of the substitute Sequence Listing submitted herewith in the above-mentioned application are the same, and contain no new matter.

Respectfully submitted,

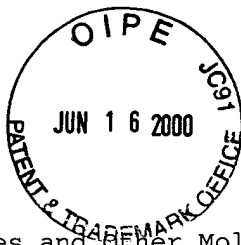
A handwritten signature in black ink, appearing to read "David R. Marsh".

David R. Marsh (Reg. No. 41,408)

June E. Cohan (Reg. No. 43,741)

Date: June 16, 2000

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1299 Pennsylvania Avenue, N.W.  
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Attachment  
"A"

<110> CaJacob, Claire A.  
Liu, Jingdong

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The Tetrapyrrole Pathway

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 cgtaagatct gggagattag tgagaaactt gttgggtttg cctaagtggg aggagcctcc 180  
 aacatcccat gttgttctag agaccttgca cttgcatgga ggaagaaaat gacgtctcaa 240  
 aagagtggat agataa 256

<210> 33  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 33

ggctaaacag ctcagccatg attgatggtg gagacttcga tggtgccaag gcgtacaagg 60  
 acagcaaagt ctgcaatatg ctcacaatgc aagaattcca cagacgattc catgaggaaa 120  
 ctggaatcac atttgcttcc ctttaccctg gttgcattgc cacaacaggc ctgttcagag 180  
 agcacttccc ttgttcagaa actctgttnc cctccattc cagaagtaca taaaccaaag 240  
 gctatgtctc cggaagatg 259

<210> 34  
 <211> 176  
 <212> DNA  
 <213> Glycine max

<400> 34

agcataatgc cacaaatgca gaatttcaca gacgattcca tgaggatact ggaatcacat 60  
 ttgcttcctt ttaccccggt tgcattgccca caacaggcct gttcagagag cacattccct 120  
 tgttcagaac tctgtccctc cattccagaa gtacataacc aaagggtat gtctca 176

<210> 35  
 <211> 256



<212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 35  
  
 caggaaagag acttgccacag gttgtgagtg atccacnccc taacaaaatc aggtgttttac 60  
 tggagctgga acgcggcctc tgcttcgttt gaaaaccaat tgtccaaga agccagcgat 120  
 gcagataagg tcgcaagggt tgggagatta gtgagaaact tactggtttg gcttaagtgg 180  
 tactttggca gcttccaata tccatcttga tttagggaca tttgtcatgg agttcaataa 240  
 catctcagaa gagttt 256

<210> 36  
 <211> 248  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 36  
  
 caggaaagag acttgccacag gttgtgagtg atccaagcct aacaaaatca ggtgtttact 60  
 ggagctggaa cgcggncctg ctgcttcgtt tgaaaaccaa ttgtgcccaa gaagccagcg 120  
 atgcagataa ggctncgcaa ggtttgggag attagtgaga aacttactgg tttgggctaa 180  
 gtgggtacttt ggcagcttcc caatatccat ctgatttagg gacattgtca ggagttcaat 240  
 aacatctc 248

<210> 37  
 <211> 335  
 <212> DNA  
 <213> Glycine max  
  
 <400> 37  
  
 ggtgtgtctc tcaaggactc caccttggtc ggtctttcat tttcagaacc tatcaaagct 60  
 aacttcagct cttctgcatt gaggtgtcag aggggaattcg aacaaaagct ctgtgctgtg 120  
 agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc agaaggggaag 180  
 aaaacattga ggaagggcag tgttgtgata actggggcct catctggact aggcctggcc 240  
 actgctaagg ctttggctga gacgggaaaa tggcatgtaa taatggcctg cagggattac 300  
 ctcaaagctg caagagctgc aaaatccgct ggcat 335

<210> 38  
 <211> 258  
 <212> DNA  
 <213> Glycine max

<400> 38

cggaaaatgg catgtaataa tggcctgcag ggattacctc aaagctgcaa gagctgcaaa 60  
 atccgctggc atggctaagg aaaactacac catcatgcac taggaccttg cctcgctcga 120  
 cagtgtccgc caatttggtg ataacttcag aagatcggaa atgccgtag atgtgctggt 180  
 ttgcaatgct gctgtttact tgccaactgc taaggaacct accttcactg ctgagggctt 240  
 tgaacttagt gttgggac 258

<210> 39  
 <211> 246  
 <212> DNA  
 <213> Glycine max

<400> 39

aaacattgag gaagggcagt gttgtgataa ctggggcttc atctggacta ggcctggcca 60  
 ctgctaaggc tttggctgag acgggaaaat ggcattgtaat aatggcctgc agggattacc 120  
 tcaaagctgc aagagctgca aaatccgctg gcatggctaa ggaaaactac accatcatgc 180  
 acttggacct tgccctcgctc gacagtgtcc gccaatgtgt tgataacttc agaagatcgg 240  
 aaatgc 246

<210> 40  
 <211> 260  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 40

ctgcaaganc tgcaaaatcc gctggcatgg ctaaggaaaa ctacaccatg aatgcacttg 60  
 gaccttgctt cgctcgacag tgtccgcaa tttgttgata acttcagaag atcagaaatg 120  
 ccgttagatg tgctggtttg ccatgctgct gtttacttgc caactgctaa ggaacctacc 180  
 ttcactgctg agggctttga acttagtggt gggacaaatc atctggggca tttcctctc 240

tcgcgcctgt tgcttgagga 260

<210> 41  
 <211> 278  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 41

atcttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggttna agaggggaatt 60  
 cgaacaaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 120  
 ccaagtctac accagaaggg aagaanacat tgaggaaggg cagtgttgtg ataactgggg 180  
 cttcatctgg actaggcctg gccactgcta aggctttggc tgagacggga aaatggcatg 240  
 taataatggc ctgcagggat tacctcaaag ctgcaaga 278

<210> 42  
 <211> 248  
 <212> DNA  
 <213> Glycine max  
 <400> 42

ctgtgctgtg agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc 60  
 agaaggggaac gaaaacattg aggaagggca gtgttgtgat aactggggct tcatctggac 120  
 taggcctggc cactgctaag gctttggctg agacgggaaa atggcatgta ataatggcct 180  
 gcagggatta cctcaaagct gcaagagctg caaatccgc tggcatggct aaggaaaact 240  
 acactgtc 248

<210> 43  
 <211> 280  
 <212> DNA  
 <213> Glycine max  
 <400> 43

gtgtctctca aggactccac cttgttcggc ctttcatttt cagaacctat caaagctaac 60  
 ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 120  
 gccgaaacag tggctacagc cttccagcag ttaccaagtc tacaccagaa ggggaagaaaa 180  
 cattgaggaa gggcagtggt gtgataactg gggcttcac tggactaggg ctggccactg 240

ctaaggcttt ggctgagacg ggaaaatggc atgtaataat 280

<210> 44  
<211> 269  
<212> DNA  
<213> Glycine max

<400> 44

aaagagtggg gtgtctctca aggactccac cttgttcggg ctttcatttt cagaacctat 60  
caaagctaac ttcagctctt ctgcattgag gtgtaagagg gaattcgaac aaaagctctg 120  
tgctgtgagg gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga 180  
aggggaagaaa acattgagga agggcagtgt tgtgataact ggggcttcat ctggactagg 240  
cctggccact gctaaggctt tggctgaga 269

<210> 45  
<211> 236  
<212> DNA  
<213> Glycine max

<400> 45

cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggaagcaaac 60  
attgaggaag ggcagtgttg tgataactgg ggcttcatct ggactaggcc tggccactgc 120  
taaggctttg gctgagacgg gaaaatggca tgtataatg gcctgcaggg attacctcaa 180  
agctgcaaga gctgcaaaat ccgctggcat ggctaaggaa aactacacca tcatgc 236

<210> 46  
<211> 211  
<212> DNA  
<213> Glycine max

<400> 46

ctcgagcgtg cgagaagaga cagaaggggg aaaatggcat gtaataatgg cctgcaggga 60  
ttacctcaaa gctgcaagag ctgcaaaatc cgctggcatg gctaaggaaa actacaccat 120  
catgcacttg gaccttgctt cgctcgacag tgtccgcaa tttgttgata acttcagaag 180  
atcggaaatg ccgttagatg tgctggtttg c 211

<210> 47  
 <211> 276  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 47

cttttttttct tcttcttgaa atggctctcc aggetgcttc tctgttccct gcttctttct 60  
 cggttcttaa agagggaaag agtgggtgtgt ctctcaagga ctccaccttg ttcgggtcttt 120  
 cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc aagaggggaat 180  
 tcgancaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 240  
 ccaagtctac accagaaggg aagnaaacat tgagga 276

<210> 48  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<400> 48

cttctcttgt tctgtcttct ttctcggttc ttaaagaggg aaagagtggg gtgtctctca 60  
 aggactccac cttgttcggg ctttcatttt cagaacctat caaagctaac ttcagctctt 120  
 ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg gccgaaacag 180  
 tggctacagc ctctccagca gttaccaagt ctacaccaga agggaagaaa acattgagga 240  
 agggcagtggt tgtgataact ggggcttca 269

<210> 49  
 <211> 279  
 <212> DNA  
 <213> Glycine max

<400> 49

tagtcaaaat ctagtctcat acttttggtc ttcttcttga aatggctctc caggctgctt 60  
 ctcttggtcc tgcttcttcc tcggttctta aagagggaaa gagtgggtgtg tctctcaagg 120  
 attccacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc agctcttctg 180  
 cattgaggtg caagagggaa ttcgaacaaa agctctgtgc tgtgagggcc gaaacagtgg 240  
 ctacagcttc tccagcagtt accaagtcta caccagaag 279

<210> 50  
 <211> 257  
 <212> DNA  
 <213> Glycine max  
  
 <400> 50  
  
 ttctcttgtt cctgcttctt tctcggttct taaagagggg aagagtgggtg tgtctctcaa 60  
 ggactccacc ttgttcggtc tttcattttc agaacctatc aaagctaact tcagctcttc 120  
 tgcattgagg ttcaagaggg aattcgaaca aaagctctgt gctgtgaggg ccgaaacagt 180  
 ggctacagcc tctccagcag ttaccaagtc tacaccagaa gggaagataa cattgaggaa 240  
 gggcagtgtt gtgataa 257

<210> 51  
 <211> 243  
 <212> DNA  
 <213> Glycine max  
  
 <400> 51  
  
 ggctgcttct cttgttcctg cttctttctc gggtcttaaa gagggaaaga gtggtgtgtc 60  
 tctcaaggac tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag 120  
 ctcttctgca ttgaggtgca agaggggaatt cgaacaaaag ctctgtgctg tgagggccga 180  
 aacagtggct acagcctctc cagcagttac caagtctaca ccagaaggga agaaaacatt 240  
 gag 243

<210> 52  
 <211> 277  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 52  
  
 caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60  
 ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagaggga agagtgggtg 120  
 gtctctcaag gactccacct tgttcgggtc ttcattttca gaacctatca aagctaactt 180  
 cagctcttct gcattgaggt ncaagaggga attcgaacaa aagctctntg ctgtgagggc 240  
 cgaaacagtg gctacagcct ctccagcagt taccaag 277

<210> 53  
 <211> 271  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 53

cttttttttct tcttcttgaa tggctctcca ggctgcttct cttgancctg cttccttctc 60  
 gggttcttaaa gagggaaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtctttc 120  
 attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgagggttaa gagggaattc 180  
 gaacaaaagc tcngtgctgt gagggccgaa acagtggcta cagcctctcc agcagttacc 240  
 aagtctacac cagaaggcaa nnaacattga g 271

<210> 54  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 54

cnaatttgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60  
 ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120  
 gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180  
 cagctcttct gcattgaggt ccaagagggga attcgaacaa aagctctgtg ctgtgagggc 240  
 cgaaacagtg gctanagcct ctccagcag 269

<210> 55  
 <211> 282  
 <212> DNA  
 <213> Glycine max

<400> 55

tcaaaatcta gtttcatact tttcatcttc ttcttgaaat ggctctccag gctgcttctc 60  
 ttgttctga ttctttctcg gttcttaaag acggtgagat gtggtgtgtc tctcaaggac 120  
 tccacctagt tcggtctggc attttcagaa cctatcaaag ctaacttaag ctcttctgca 180  
 ttgagggtgca agagggattc cgcacaaaag ctctgtgctg tgagtgccga gacagtggct 240

acagcgtctg cagcagttac caagtctaca cgagaagggg ag 282

<210> 56  
 <211> 263  
 <212> DNA  
 <213> Glycine max

<400> 56

acttctcttg ttctgcttc tttctcggtt cttaaagagg gacagagtgg tgtgtctctc 60  
 aaggactccg cttgttcggt ctttcatttt cagaacctat caaagctaac ttcagctctt 120  
 ctgcattgag gtgcaagagg gaattcgaac aatcgctctg tgctgtgagg gccgaaacag 180  
 tggttacagc ctctccagca gttaccaagt ctacaccaga tgggaagaaa acattgagtg 240  
 aaggagtgtg gtgaaactgg ggc 263

<210> 57  
 <211> 313  
 <212> DNA  
 <213> Glycine max

<400> 57

gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct taaagagggg 60  
 aagagtgggtg tgtctctcaa ggactccacc ttgttcgggc tttcattttc agaacctatc 120  
 aaagctaact tcagctcttc tgcattgagg tgcaagaggg aattcgaaca aaagctctgt 180  
 gctgtgaggg ccgaaacagt ggctacagcc tctccagcag ttaccaagtc tacaccagaa 240  
 ggcaagaaaa cattgaggaa gggcagtgtt gtgataactg gggcttcctc tggacgagggc 300  
 ctggccactg cta 313

<210> 58  
 <211> 266  
 <212> DNA  
 <213> Glycine max

<400> 58

ccgtgataac acactaacac caccacttca tcaactttac ttgacaacaa tattgtaaaa 60  
 ctcaaaatct agtttcatac ttttgctctt cttcttgaaa tggctctcca ggctgcttct 120  
 cttgttcttg cttctttctc ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac 180



tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca 240  
 ttgaggtgca agaggggaatt cgaaca 266

<210> 59  
 <211> 277  
 <212> DNA  
 <213> Glycine max

<400> 59

caccatcact tcatcaactt tacttgacaa caatattgta aaactcaaaa tctagtttca 60  
 tacttttttt cttcttcttg aaatggctct ccaggctgct tctcttggtc ctgcttcttt 120  
 ctcggttctt aaagagggaa agagtgggtg gtctctcaag gactccacct tgttcggtct 180  
 ttcattttca gaacctatca aagctaactt cagctcttct gcattgaggt gcaagagggga 240  
 attcgaacaa aagctctgtg ctgtgagggc cgaacaa 277

<210> 60  
 <211> 151  
 <212> DNA  
 <213> Glycine max

<400> 60

gcattcttct cggttcttaa agagggaaag actggtgtgt cactcacgga ttccaccttg 60  
 tacggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc 120  
 aagaggggaat tcgaacaaaa actctgtgct g 151

<210> 61  
 <211> 266  
 <212> DNA  
 <213> Glycine max

<400> 61

caccatttca tcaactttac ttgacaacaa tattgtaaaa ctcaaaatct agtttcatac 60  
 tttttttact cttcttgaaa tggctctcca ggctgcttct cttgttcctg cttctttctc 120  
 gggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtctttc 180  
 attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca agaggggaatt 240  
 cgaacaaaag ctctgtgctg tgaggg 266

<210> 62  
 <211> 229  
 <212> DNA  
 <213> Glycine max

<400> 62

ttcatcaact ttacttgaca acaatattgt aaaactcaaa atctagtttc atactttttt 60  
 tcttcttctt gaaatggctc tccaggtgc ttctcttggt cctgcttctt tctcggttct 120  
 taaagagggga aagagtgggtg tgtctctcaa ggactccacc ttgttcgggc tttcattttc 180  
 agaacctatc aaagctaact tcagctcttc tgcattgagg tgcaagagg 229

<210> 63  
 <211> 268  
 <212> DNA  
 <213> Glycine max

<400> 63

cccgatgataa cacactaaca ccatcacttc atcaacttta cttgacaaca atattgtaaa 60  
 actcaaaatc tagtttcata cttttattcg tcttctttaa atggctctcc aggctgcttc 120  
 tcttgttcct gcttctttct cggttcttaa atagggaaag agtgggtgtgt ctctcaagga 180  
 ctccaccttg ttcgggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc 240  
 attgaggttc aagaggggaat tcgaacaa 268

<210> 64  
 <211> 278  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 64

tatnatacca cttcatcaac ctnacnctga caacaatatt gtaaaactcn naatctagtt 60  
 tcatactttt tttcttcttc ttgaaatggc tctccaggct gcttctcttg ttctgcttc 120  
 tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttggttcgg 180  
 tctttcattt tcagaacctc tcaaagctaa cttcagctct tctgcattga ggtntcaaga 240  
 gggaattcga acaaaagctc tgtgctgtga gggccgaa 278

<210> 65  
 <211> 275  
 <212> DNA  
 <213> Glycine max

<400> 65

ttcatcaact ttacttgaca acaatattgt aaaattcaaa atctagtttc atacttttat 60  
 tcttcttctt gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct 120  
 taaagagggg aagagtgggtg tgtctctcaa ggactccacc ttgttcgggc tttcattttc 180  
 agaacctatc aaagctaact tcagctcttc tgcattgagg tttaagaggg aattcgaaca 240  
 aaagctctgt gctgtgaggg ccgaaacagt ggcta 275

<210> 66  
 <211> 344  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 66

caatattgta naactcaaaa tctagtttca tacttttctt ctacttcttg aaatggctct 60  
 ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120  
 gtttctcaag gactccacct tgttcgggtc ttcattttca gaacctttta tagctaactt 180  
 cagctcttct gcattgaggt gtaagagggg attcgaacaa aagctctgtg ctgtgagggc 240  
 cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggacgtcaac 300  
 attgaggaag ggcagtgttg tgataactgg ggcttcatct ggac 344

<210> 67  
 <211> 255  
 <212> DNA  
 <213> Glycine max

<400> 67

cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60  
 aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc caggctgctt 120  
 ctcttggtcc tgattcttac tcggttctta aagagggaaa gagtgggtgtg tctctcaagg 180  
 actccacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc agctcttctg 240

cattgaggtg caaga 255

<210> 68  
 <211> 249  
 <212> DNA  
 <213> Glycine max

<400> 68

ttttcattac cgccgtgata acacactaac accaccactt catcaacttt acttgacaac 60  
 aatattgtaa aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc 120  
 caggtgctt ctcttggtcc tgcttctttc tcggttctta aagagggaaa gagtgggtgtg 180  
 tctctcaagg actccacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc 240  
 agctcttct 249

<210> 69  
 <211> 249  
 <212> DNA  
 <213> Glycine max

<400> 69

cacactaaca ccaccacttc atcaacttta cttgacaaca atattgtaaa actcaaaatc 60  
 tagtttcata ctttttttct tcttcttgaa atggctctcc aggtgcttc tcttggtcct 120  
 gcttctttct cggttcttaa agagggaaag agtgggtgtgt ctctcaagga ctccaccttg 180  
 ttcgggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggttc 240  
 aagagggaa 249

<210> 70  
 <211> 294  
 <212> DNA  
 <213> Glycine max

<400> 70

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60  
 ccaggtgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtgt 120  
 gtctctcaag gactccacct tgttcgggtct ttcattttca gaacctatca aagctaactt 180  
 cagctcttct gcattgaggt gcaagagggg attcgaacaa aagctctgtg ctgtgagggc 240

cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggaa 294

<210> 71  
 <211> 270  
 <212> DNA  
 <213> Glycine max

<400> 71

ctccaggctg cttctcttgt tcttgcttct ttctcggttc ttaaagaggg aaagagtgg 60  
 gtgtctctca aggactccac cttgttcggg ctttcatttt cagaacctat caaagctaac 120  
 ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 180  
 gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga aggcaagata 240  
 acattgagaa gggcagtggt gtgataactg 270

<210> 72  
 <211> 254  
 <212> DNA  
 <213> Glycine max

<400> 72

attaccgccg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60  
 tgtaaaactc aaaatctagt ttcatacttt ttttcttctt cttgaaaggc tctccaggct 120  
 gcttctcttg ttctgcttc tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc 180  
 aaggactcca ccttggttcg tctttcattt tcagaacctc agctaacttc agctcttctg 240  
 cattgaggtg caag 254

<210> 73  
 <211> 100  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 73

ccctgcaggc cattattaca aagctgcaag agctgcaaaa tccgctggca tggctaagga 60  
 aaactacacc atcatgcanc ttggaccttg cctcgcctga 100

<210> 74

<211> 262  
 <212> DNA  
 <213> Glycine max  
  
 <400> 74  
  
 cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60  
 aactcaaaat ctagtttcat actttttttc ttctttctga aatggctctc caggctgctt 120  
 ctcttgttcc gcttctttct cggttcttaa agagggaaag agtggtgtgt ctctcaagga 180  
 ctccaccttg ttcgggtcttt cattttcaga acctatcaaa gctaacttca tcttctgcat 240  
 tgaggtgcaa gaggggaattc ga 262

<210> 75  
 <211> 184  
 <212> DNA  
 <213> Glycine max  
  
 <400> 75  
  
 gtgataacac actaacacca ccacttcac c aactttactt gacaacaata ttgtaaaact 60  
 caaaatctag ttccatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 120  
 tgttctgtgt tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc 180  
 cacc 184

<210> 76  
 <211> 229  
 <212> DNA  
 <213> Glycine max  
  
 <400> 76  
  
 ggaaccacac atttttcatt accgccgtga taacacacta acaccaccac ttcatcaact 60  
 ttacttgaca acaatattgt aaaactcaaa atctgggttc atactttttt tcttcttctt 120  
 gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct taaagagggga 180  
 aagagtgggtg tgtctctcaa ggactccacc ttgttcgggc tttcatttt 229

<210> 77  
 <211> 270  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 77

attaccgctcg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60  
 tgtaaaactc aaaatctagt nnnnnnnnnn nnnnnnnnnn nnngaaatgg ctctccaggc 120  
 tgctttctctt gttcctgctt ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct 180  
 caaggactcc accttggtcg gtctttcatt ttcagaacct atcanagcta acttcagctc 240  
 ttctgcatga gngntagang gantcgaaca 270

<210> 78  
 <211> 267  
 <212> DNA  
 <213> Glycine max

<400> 78  
 ggctgcgaga agacgacaga aggggaacca cacatTTTTTc attaccgccg tgataacaca 60  
 ctaacaccac cacttcatca actttacttg acaacaatat tgtaaaactc aaaatctagt 120  
 ttcatacttt ttttctctctt cttgaaatgg ctctccaggc tgctttctctt gttcctgctt 180  
 ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct caaggactcc accttggtcg 240  
 gtctttcatt ttcagaacct atcaaag 267

<210> 79  
 <211> 158  
 <212> DNA  
 <213> Glycine max

<400> 79  
 tcaaaatcta gtttcatact tttttcttc tcttgaaat ggctctccag gctgcttctc 60  
 ttgttctctgc ttctttctcg gttcttaaag agggaaagag tgggtgtgtct ctcaaggact 120  
 ccaccttggt cggtctttca ttttcagaac ctatcaaa 158

<210> 80  
 <211> 278  
 <212> DNA  
 <213> Glycine max

<400> 80  
 cacactaaca ccaccacttc atcaacttta cttgacaaca atattgtaaa actcaaaatc 60

tagtttcata ctttttttct tcttcttgaa atggctctcc aggctgcttc tcttgttcct 120  
gcttctttct cggttcttaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt 180  
tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca 240  
agaggggaatt cgaacaaaag ctctgtgctg tgagggcc 278

<210> 81  
<211> 285  
<212> DNA  
<213> Glycine max

<400> 81  
cacggctgcg aaagacgaca gaaggggacc acacattttt cattaccgcc gtgataacac 60  
actaacacca ccagctcatc aactttactt gacaacaata ttgtaaaact caaaatctag 120  
tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct tgttcttgct 180  
tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc caccttggtc 240  
ggtctttcat tttcagaact atcaaagcta attcagctct tctgc 285

<210> 82  
<211> 269  
<212> DNA  
<213> Glycine max

<400> 82  
ggttaccatt atttctttat aactatacta ctcatcagct gcatgggtatt tttgctttca 60  
ttgttggtgt tgttggtgat ccacttcac aactttactt gacaacaaga ttgtaaaact 120  
caaaatctag tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 180  
tgttcttgct tctttctcgg ttcttaaagc gggcaagagt ggtgtgtctc tcaaggactc 240  
caccttggtc ggtctttcat tttcagaac 269

<210> 83  
<211> 260  
<212> DNA  
<213> Glycine max

<400> 83  
acggcgagaa gacgacagaa ggggaaccac acatttttca ttaccgccgt gataacacac 60



taacaccacc acttcatcaa ctttacttga caacaatatt gtaaaactca aaatctagtt 120  
tcatactttt tttcttcttc ttgaaatggc tctccagget gcttctcttg ttcttgcttc 180  
tttctcgggt cttaaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttggtcgg 240  
tctttcattt tcagaaccta 260

<210> 84  
<211> 108  
<212> DNA  
<213> Glycine max

<400> 84

ttcagctctg ctgcattgag gtgccagagg gaattcgaac aaaagctctg tgctgtgagg 60  
gccgaaacag tggctacagc ctctccagca gttaccaagt ctacacca 108

<210> 85  
<211> 258  
<212> DNA  
<213> Glycine max

<400> 85

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60  
ccaggctgcc tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120  
gtctctcaag gactcacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc 180  
agctcttctg cattgaggtg taagagggaa ttcgaacaaa agctctgtgc tgtgagggcc 240  
gaaacagtgg ctacagcc 258

<210> 86  
<211> 250  
<212> DNA  
<213> Glycine max

<400> 86

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60  
ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120  
gtctctcaag gctccacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc 180  
agctcttctg cattgaggtg caagagggaa ttcgaacaaa agctctgtgc tgtgagggca 240

aacagtggct

250

<210> 87  
<211> 260  
<212> DNA  
<213> Glycine max  
  
<223> unsure at all n locations  
<400> 87

caaaaatttg gccctttgag gggttcagtca gtggcaacaa caactccagg agtcaccaag 60  
gcttcaccag aaggcaagaa nactttgagg aaaggcagtg ttattatcac tgggggttcc 120  
tctggattag gcctggccac tgctaaggct ttggctgaga caggaaagtg gcatgtgata 180  
atggcctgcc gggatttcct caaagccgaa anngctgcga aatctgccgg cattgctaag 240  
gaaaactaca ctattatgca 260

<210> 88  
<211> 281  
<212> DNA  
<213> Glycine max  
  
<400> 88

caacaaaaaa ttggcccttt gagggttcag tcagtggcaa caaccactcc aggagtcacc 60  
aaggcttcac cagaaggcaa gaaaactttg aggaaaggca gtgttattgt cactgggctt 120  
cctctggatt aggcctggcc acggccaagg ctttggctga gacaggaaag tggcatgtga 180  
ttatgcactg cagggtattc ctcaaagctg agagggctgc aaaatctgct ggcattgcta 240  
aggaaattgt gtctcttgat agtgtgaggc aatttgtgga t 281

<210> 89  
<211> 385  
<212> DNA  
<213> Glycine max  
  
<400> 89

ctttgaactt agtgttgggc caaataattt gggcgttttc gtctctctcg cctgttgctt 60  
gaggacttgg aaaaatccga ttacccttca aagcgcttga tcatcgttgg ttcaatatca 120  
cggaacacac acacattggc tggtaatgta cctcccaagg ctaaccttgg tgacttgagg 180

ggacttcaag gtggtttgaa tgggcttaac agctcagcca tgattgatgg tggagacttc 240  
 gatggtgccca aggcgtacaa ggacagcaaa gtctgcaata tgctcacaat gcaagaattc 300  
 cacagacgat ttcatgagga aaactgaatc acatttgctt tcctttaacc cgggtgcatt 360  
 gccacaacag gcctgttcag agagc 385

<210> 90  
 <211> 241  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 90

gataacttca gaagatcgga aatgccgtta gatgtgctgg tttgcaatgc tgctgtttac 60  
 ttgccaaactg ctaaggaacc taccttcaact gctgagggct ttgaacttag tgttgggaca 120  
 aatcatctgg ggcatttcct cctctcgcgc ctggtgcttg aggacttgga aaaatccgat 180  
 tacccttcaa agcgcttgat catcgttggt tcaataacag ggnacacaaa cacattggct 240  
 g 241

<210> 91  
 <211> 267  
 <212> DNA  
 <213> Glycine max  
 <400> 91

ctcctctcgc gcctgttgct tgaggacttg gaaaaatccg attacccttc aaagcgcttg 60  
 atcatcgttg gttcaataac agggaaacaca aacacattgg ctggtaatgt acctcccaag 120  
 gctaaccttg gtgacttgag gggacttcag ggtggtttga atgggctaaa cagctcagcc 180  
 atgattgatg gtggagagat cgatggtgcc aaggcgtaca aggacagcaa agtctgcaat 240  
 atgctcacia tgcaagaatt ccacaga 267

<210> 92  
 <211> 256  
 <212> DNA  
 <213> Glycine max  
 <400> 92

ttagatgtgc tggtttgcaa tgctgctgtt tacttgccaa ctgctaagga acctaccttc 60

actgctgagg gctttgaact tagtggtggg acaaatcatc tggggcattt cctcctctcg 120  
 cgctgttgct ttgaggactt ggaaaaatcc gattaccctt caaagcgctt gatcatcggt 180  
 gggttcaataa cagggaacac aaacacattg gctggtaatg tacctcccaa ggctaacctt 240  
 ggtgacttga ggggat 256

<210> 93  
 <211> 260  
 <212> DNA  
 <213> Glycine max

<400> 93

cttcactgct gagggctttg aacttagtgt tgggacaaat catctggggc atttcctcct 60  
 ctgcgccttg ttgcttgagg acttgaaaa atccgattac ctttcaaagc gcttgatcat 120  
 cgttggttca ataacaggga acacaaacac attggctggt aatgtacctc ccaaggctaa 180  
 ccttggtgac ttgaggggac ttcaggggtgg tttgaatggg ctaaacagct cagccatgat 240  
 tgatggtgga gattcgatgg 260

<210> 94  
 <211> 274  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 94

cntaccttca ctgctgaggg ctttgancct antgttnng acaaattcat ctggggcatt 60  
 tcctcctctc gcgcctgttg cttgaggact tggaaaaatc cgattaccct tcaaagcgct 120  
 tgatcatcgt tgggttcaata acagggaaca caaacacatt ggctggtaat gtactcccaa 180  
 ggctaacctt ggtgacttga ggggacttca ggggtggttg aatgggctaa acagctcagc 240  
 catgattgat ggtggagatt cgatggtgcc aagc 274

<210> 95  
 <211> 284  
 <212> DNA  
 <213> Glycine max

<400> 95

cagtattgtg aaatgttgaa agcagacgag tggcctgttt gtgcatttat ttctcaagat 60  
 tgtcgtccag caaatccatc ggaagaagcg cacaatgttc aaacatcgta tgaagtgtgg 120  
 gagaagacat tagagatgat tggccttccc tcagatgctg tggaaaggct tttagatggg 180  
 gaagaagtta aatgccgtta tggacaagaa cagtaatcta atatacaata tctcccttaa 240  
 tctgtaaggg cacttccatt atttatagct agtaatgagc attt 284

<210> 96  
 <211> 265  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 96

aagagagaga tggcaacgac gacgtcgtct tcaagcgagg nagcaccgaa cactaagaag 60  
 aacaagaagg agcgttttagg ttggntagaa tggttaagag gttgggttcta tttgggtctac 120  
 gaaatgctct ttcagcgcac catggcgagc cacttgcaca accctatgcc tctccctcct 180  
 gtaaacgacc tcacttgcac tgtcaccggc tccaccagcg gcattggcct cgaaattgct 240  
 aggcaattgg ctcaatcagg ggccc 265

<210> 97  
 <211> 135  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 97

ggaaagaaca atggttggca gtaggtatac tacaagtaac tcctcaatcc catgtaagan 60  
 aacaaaaggc agcttcttta atgccagtat tgcacaacac ctcaactag tacaanaaaa 120  
 aacaaagaaa agggg 135

<210> 98  
 <211> 129  
 <212> DNA  
 <213> Glycine max  
 <400> 98

ccatttgcca ttggatggcg ctgctagaat ttgtactggt gccaccagtt tcctctccct 60

ttatgtccca gatgagtacc caagtggcaa aaattagatt agactaatat atatatattg 120  
 ttttatcag 129

<210> 99  
 <211> 270  
 <212> DNA  
 <213> Glycine max

<400> 99

gtccaggccc ggtggcggcg gtggcattag cagggtcctt caagacggtg ccgtttgga 60  
 aaaaggctgg ggttaatgcc cctgttggtt acggtgtcat gccacctgac gcatatcgtg 120  
 ctgccaaagg tgttcttacc gatcaaaaac ctgggtcctgt gcctttcttc gctgctggaa 180  
 tcagctccgt tttacacca aagaaccctg ttgccctac cctacatttc aactatcgct 240  
 attttgaaac cgatgctcct aaagatgctc 270

<210> 100  
 <211> 264  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 100

aattgcgaag gggacgatat gttgaattca atttggtata tgatagnggt acaacatttg 60  
 gnctgaaaac tggagggaga atagagagta tacttgtttc tctccactg actgctcggt 120  
 gggaatacga tcataaaccg gaagaaggaa gcgaagaatg gaaactcttg gacgcatgca 180  
 tcaaccccaa ggaatggatc taattcatca gttgaccccc caatttgtca gctttttaat 240  
 ttaataataa gggagcttgt ttct 264

<210> 101  
 <211> 249  
 <212> DNA  
 <213> Glycine max

<400> 101

ctcccttatt attaaattaa aaagctgaca aattgggggg tcaactgatg aattagatcc 60  
 attccttggg gttgatgcat gcgtccaaga gtttccattc ttcgcttctt tcttccggtt 120  
 tatgatcgta ttcccaccga gcagtcagtg ggagagaaac aagtatactc tctattctcc 180

ctccagtttt cagtccaaat gttgtacccc tatcatatac caaattgaat tcaacatatc 240  
gtcccccttc 249

<210> 102  
<211> 262  
<212> DNA  
<213> Glycine max

<400> 102

ggagatgctc ctttcctttg ctactgaatg tgcaaattct gttattcctg cttatttacc 60  
tatcatagag aaaaggaagg atttgccctt caatgatcat cagaaagcat ggcaacaatt 120  
gcgaagggga cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact 180  
gaaaactgga gggagaatag agagtatact tgtttctctc ccactgactg ctcggtggga 240  
atacgatcaa aaccggaaga ag 262

<210> 103  
<211> 240  
<212> DNA  
<213> Glycine max

<400> 103

agatgctcct ttcctttgct actgaatgtg caaattctgt tattcctgct tatttaccta 60  
tcatagagaa aaggaaggat ttgcccttca atgatcatca gaaagcatgg caacaattgc 120  
gaaggggacg atatgttgaa ttcaatttgg tatatgatag ggggtacaaca tttggactga 180  
aaactggagg gagaatagag agtatacttg tttctctccc actgactgct cgggtgggaat 240

<210> 104  
<211> 249  
<212> DNA  
<213> Glycine max

<400> 104

acggctgcga gaagacgaca gaaggggatg atcttaatga ctatgatcag gagatgctcc 60  
tttcctttgc tactgaatgt gcaaattctg ttattcctgc ttatttacct atcatagaga 120  
aaaggaagga tttgcccttc aatgatcatc agaaagcatg gcaacatttg cgaacgggga 180  
cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact gaaaactgga 240

gggagaata 249

<210> 105  
 <211> 250  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 105

aattgcgnag gggangatat gntgaatnca attnggtana tgntannggt acaacanttg 60  
 gactgaatnc tggaggggag aatagagagt atacttgttt ctctcncact gactgctcgg 120  
 tgggaatacg atcatnaacc ggnagangga agcgaagact ggnaactctt ggncgcatgc 180  
 atnaaccca aggaatggat ctaattcatc agttgacccc ccaatttgtc agctttttaa 240  
 ttttaataata 250

<210> 106  
 <211> 268  
 <212> DNA  
 <213> Glycine max  
 <400> 106

ggatttgccc ttcaatgatc atcagaaagc atggcaacaa ttgcgaaggg gacgatatgt 60  
 tgaattcaat ttggtatatg ataggggtac aacatttgga ctgaaaactg gagggagaat 120  
 agagagtata cttgtttctc tcccactgac tgctcgggtg gaatacgatc ataaaccgga 180  
 agaaggaagc gaagaatgga aactcttgga cgcgatgcac aacccaagg aatggatcta 240  
 attcatcagt tgacccccca atttgtca 268

<210> 107  
 <211> 268  
 <212> DNA  
 <213> Glycine max  
 <400> 107

acggctgcga gaagacgaca gaaggggaga aaaggaagga tttgcccttc aatgatcatc 60  
 agaaagcatg gcaacaattg cgaaggggac gatatgttga attcaatttg gtatatgata 120  
 ggggtacaac atttggactg aaaactggag ggagaataga gagtatactt gtttctctcc 180



cactgactgc tcggtgggaa tacgatcata aaccggaaga aggaagcgaa gaatggaaac 240  
tcttggacgc atgcatcaac cccaagga 268

<210> 108  
<211> 321  
<212> DNA  
<213> Glycine max

<400> 108  
ggaagacctt atcatctccg aatttcattt tcagaagcct ctttgggaat caaatccgaa 60  
gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttcctt tttctctctg 120  
gctccgcttc cactactcca actgcatctt cgctcactaa gcgcagttgg aagccacctc 180  
cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag accccggagg 240  
ccaatcgctc cgaaacgttt ctcataggag tggacgaggc ccagtcttcc acttcgggtc 300  
gggcccgcct cgagaagatg a 321

<210> 109  
<211> 282  
<212> DNA  
<213> Glycine max

<400> 109  
cacatccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttcctt 60  
tttctctctg gctccgcttc cactactcca actgcatctt cgctcactaa gcgcagttgg 120  
aagccacctc cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag 180  
accccgaggg ccaatcgctc cgaaacgttt ctcataggag tggacgaggc ccagtcttcc 240  
acttcgggtc gggcccgcct tcgagaagat gataagggac gc 282

<210> 110  
<211> 260  
<212> DNA  
<213> Glycine max

<400> 110  
ccttatcatt tccgaatttc attttcagaa gcctcttttg gaatcaaatt cgaagcatga 60  
tgcattgtgc gagcattgtc tcggctccgt cctacgcgtt cccttttctc tctggctccg 120

cttccactac tccaactgcg atctcgctca ctaagcgcag ttggaagcca cctccgagca 180  
 tggcaaaagg cccagtcaga gccaccgttt ctatagagaa agagaccccg gagggccaatc 240  
 gtccccgaaac gtttctcaga 260

<210> 111  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<400> 111

ctctttggga atcaaatccg aagcatgatg cattgtgcga gcattgtctc ggctccgtcc 60  
 tacgcgttcc cttttctctc tggtccgtct tccactactc caactgcgat ctcgctcact 120  
 aagcgcagtt ggaagccacc tccgagcatg gcaaaaggcc cagtcagagc cacgtttcta 180  
 tagagaaaga taccgccgag gccaatcgtc ccgaaacggt tctcagagga gtggacgagg 240  
 cccagtcttc cacttcggtt cgggccccgc 269

<210> 112  
 <211> 260  
 <212> DNA  
 <213> Glycine max

<400> 112

tgtgcgagca ttgtctcggc tccgtcctac gcgttccctt ttctctctgg ctccgcttcc 60  
 actactccaa ctgcgctctc gctcactaag cgcagttgga agccacctcc gagcatggca 120  
 aaaggcccag tcagagccac cgtttctata gagaagaga ccccgagggc caatcgctcc 180  
 gaaacgtttc tcagaggagt ggacgaggcc cagtcttcca cttcggttcg ggccccgttc 240  
 gagaagatga taaggagggc 260

<210> 113  
 <211> 279  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 113

gaagacttta tcatttccga atttcntttt cagangcctc tttgggaatc anntccnnng 60  
 catgatgcat tgtngcgagc nttgtctacg gctccgtcct acgcgttccc ttttcgctct 120

ggctccgctt ccactactcc aactgcgntc tcgctcacta agcgcagttg gaagccacct 180  
 ccgagnatgg caaaaggccc agtcagagcc accgtttcta tagagaaaga gaccccgag 240  
 gccaatcgtc ccgaaacgtt tctcagagga gtggacgag 279

<210> 114  
 <211> 247  
 <212> DNA  
 <213> Glycine max

<400> 114

ctccgaattt cattttcaga agcctctttg ggaatcaaat tggagtgtct gcaatccact 60  
 ccgaagcatg atgcattgtg cgagcattgt ctcggctccg tcctacgcgt tcccttttcg 120  
 ctctggctcc gctctccact actccaactg cgatctcgct ctctaagcgc agttggaagc 180  
 cacctccgag catggcaaaa gccagtcag agccaccgtt tctatagaga aagagacccc 240  
 ggaggcc 247

<210> 115  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<400> 115

cagaagcctc tttgggaatc aaatccgaag catgatgat tgtgcgagca ttgtctcggc 60  
 tccgtcctac gcgttccctt ttctctctgg ctccgcttcc actactccaa ctgccctctc 120  
 gctcactacg cgcagttgga agccacctcc gagcatggca aaaggcccag tcagagccac 180  
 cgtttctata gagatagaga ccccgagggc caatcgctcc gaaacgtttc tcagaggagt 240  
 ggacgaggcc cag 253

<210> 116  
 <211> 268  
 <212> DNA  
 <213> Glycine max

<400> 116

tcgagcgcgt tcccttttct ctctggctcc gcttccacta ctccacatgc gctctcgctc 60  
 actaagcgca gttggaagcc acctccgagc atggcaaaag gccagtcag agccaccgtt 120

tctatagaga aagagacccc ggaggccaat cgtcccgaaa cgtttctcag aggagtcgtc 180  
gaggeccagt cttccacttc ggttcggggc cgcttcgaga agatgataag ggaggcccag 240  
gacaccgtgt gcagtgcctt cgaggccg 268

<210> 117  
<211> 238  
<212> DNA  
<213> Glycine max

<400> 117

atccgaagca tgatgcattg tgcgagcatt gtctcggtc cgtcctacgc gttccctttt 60  
ctctctggct ccgcttccac tactccaact gcgatctcgc tactaagcg cagttggaag 120  
ccacctccga gcatggcaaa aggcccagtc agagccaccg tttctataga gaaagacacc 180  
ccggaggcca atggtcccga aacgtttctc agaggagtgg acgaggccca ttcttcca 238

<210> 118  
<211> 250  
<212> DNA  
<213> Glycine max

<400> 118

tccgaagcat gatgcattgt gcgagcattg tctcggtcc gtcctacgcg ttcccttttc 60  
tctctggctc cgcttccact actccaactg ccctctcgct cactaagcgc agttggaagc 120  
cacctccgag catggcaaaa ggaccagtca gagccaccgt ttctacagag acagagaccc 180  
cggaggccaa tcgtcccga acgtttctca gaggagtgga cgaggccaag tcttccactt 240  
cggttcgggc 250

<210> 119  
<211> 267  
<212> DNA  
<213> Glycine max

<400> 119

actcgagccg attcggtctg agctcttttg gaatcaaata cgaaacatga tgcattgtgc 60  
gaccattgtc tcgggtccgt cactacgcgt tcccttttct ctctgggtcc gcttccacta 120  
ctccaactac tactctcgct cactaagcgc agttggaagc cacctccgag catggcaaaa 180

ggcccagtca gagccaccgt ttctatagag acagacaccc cggaagccaa ttctcccgaa 240  
acgttttctca gacgactgga cgaggcc 267

<210> 120  
<211> 119  
<212> DNA  
<213> Glycine max

<400> 120

tcatttttcag aagcctcttt gggaatcaaa tccgaagcat gatgcattac gcgagcattg 60  
tctcggtctc gtcttacgcg ttcccttttc tctctggctc cgcttccaca caacatacg 119

<210> 121  
<211> 117  
<212> DNA  
<213> Glycine max

<223> unsure at all n locations  
<400> 121

cgaatttcat ttccagaagc ctctttggga atcaaattccg aagcatgatg cattgngcga 60  
gcattgtctc ggctccgctc tacgcgttcc cttttctctc tggctccgct tccacaa 117

<210> 122  
<211> 94  
<212> DNA  
<213> Glycine max

<400> 122

caaattccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttccct 60  
tttctctctg gctccgcttc cacacaacat acga 94

<210> 123  
<211> 81  
<212> DNA  
<213> Glycine max

<400> 123

cattttcaga agcctctttg ggaatcaaat ccgaagcatg atgcattgtg cgagcattgt 60  
ctcggtccg tcttacgctg t 81

<210> 124  
 <211> 246  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 124

cgagacccgg aggccaatcg tcncgaaacg tttctcagag gagtggacga gtgccagtct 60  
 tccacttcgg ttccgggcntc gttcgagaag atgataaagg gaggcccagg acaccgtgtg 120  
 cagtgccctc gaggccgctg atggtggggc ccagttcaag gaggacgttt ggtccaggcc 180  
 cgggtggcggc ggtggcatta gcagggtcct tcaagacggt gccgtttggg agaaggctgg 240  
 ggttaa 246

<210> 125  
 <211> 261  
 <212> DNA  
 <213> Glycine max

<400> 125

gaaagagacc ccggaggcca atcgtcccga aacgtttctc agaggagtgg acgaggcca 60  
 gtcttccact tcggttcggg cctgcttcga gaagatgata agggaggccc aggacaccgt 120  
 gtgcagtgcc ctcgaggccg ctgatggtgg ggcccagttc atggaggacg tttggtccag 180  
 gcccggtggc ggcggtggca ttagcagggt ccttcaagac ggtgccgttt gggagaaggc 240  
 tggggttaat gtctctgttg t 261

<210> 126  
 <211> 239  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 126

accaatcgtc ccgaaacgtt tctcagagga gtggacgagg ccagtccttc cacttcgggt 60  
 cgggcccgtc tcgagaagat gataaggag gcccaggaca ccgtgtgcag tgccctcgag 120  
 gccgctgatg gtggggccca gttcaaggag gacgtttggt ccaggccccg tggcggcggt 180  
 ggcnnacga ggtccttcaa gacggtgccg tttgggagaa ggctgggggt aatgtctct 239

<210> 127  
 <211> 162  
 <212> DNA  
 <213> Glycine max

<400> 127

atcaagtgct tgttatgatg agtcagaatg ttagcttggt gtactagggtg gattgtaaat 60  
 cacgtatctt gctagagtca tccgcgtaaa gcgtgaaaat gcagaaaatt acaaattgtct 120  
 aggctgcgtc tgtagtatac ctactgcaa ccattgttct tt 162

<210> 128  
 <211> 114  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 128

atcaagtgct tgttcgatg ggtcagaatg ttagcttggt gtactagggtg gattgtaaat 60  
 cacgtatctt gctagagtnc tccgcgcgga gcgtgaanat gcagagaatt acaa 114

<210> 129  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<400> 129

ggcgtctgcc aaaacaaaaa ggtcagactg ttggatcttt ccggaaggga cttaccatgt 60  
 tgctgatgc aatttctgcc agactaggca acaaagtaaa gttatcttgg aagctttcaa 120  
 gtattagtaa actggatagt ggagagtaca gtttgacata tgaaacacca gaaggagtgg 180  
 tttctttgca gtgcaaaact gttgtcctga ccattccttc ctatgttgct agtacatgcc 240  
 tgcgtcctct gtc 253

<210> 130  
 <211> 298  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 130

gctgcagatg cactttcaaa gttttattac cctccagttg ctgcagtttc catatcctat 60  
ccanaagaag ctattagatc agaatgcttg atagatgggtg agttgaaggg gggttggtcaa 120  
ttgcatccac gtagacaagg agtggaaaca ttaggaacta tatacagctc atcactattc 180  
cccaaccgag caccacgacg gaagggttcta ctcttgaatt acattggagg agcaactaat 240  
actggaattt tatcgaagac ggacagtga cttgtggaaa cagttgatcg agatttga 298

<210> 131  
<211> 283  
<212> DNA  
<213> Glycine max

<400> 131

caattatata taatctcctg ctgactcgtc tttttctttg gaataatgat atactgtcaa 60  
aaaccatata taatctcctg ctgacacatc tttttctttt cttttcttta tatcattttc 120  
cttattagtt tctttgttta ctgcagtgac gagcttagga aaattgttac ttctgacctg 180  
agaaagttgt tgggagcaga gggggaacca acatttgta accatttcta ttggagtaaa 240  
ggctttcctt tgtatggacg taactatggg tcagttctta agc 283

<210> 132  
<211> 250  
<212> DNA  
<213> Glycine max

<400> 132

tgacaatttt gatgatagag gtggataata aagctgcagt ccttggttat atcggggcac 60  
cgctcactct ggcatcacat gtgattgaag gtggttcatc accaaacttc tcgcaaataa 120  
agagattggc tttctcagca tccaagatcc tgcactcgtt actgcagaag ttacgacat 180  
ctctggcgag atacattctc taccaagctg acaatggagc tcaagctgtt cagatctttg 240  
attcatgggc 250

<210> 133  
<211> 235  
<212> DNA  
<213> Glycine max

<400> 133



tgacaatttt	gaggaaagag	gtggataata	aagctgcagt	ccttggtttt	gtcggggcac	60
cgttcactct	ggcatcatat	gtgggttgaag	gtgggttcac	aaaaaacttc	tcaaaaataa	120
agagattggc	tttctcagaa	tccaagatcc	tgcactcggt	actgcagaag	tttacaacat	180
caatggcaag	atacattcaa	taccaagctg	acaatggagc	tcaagctggt	cagat	235

<210> 134  
 <211> 282  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 134

gtggacaact	accacctgaa	atgtgggaac	gctgggtcaaa	gccttatatc	aaagagattg	60
taaatttggg	cangaaaaaa	tgccctgggg	taccaattgt	tctttatata	aacggaaatg	120
gtggtcttct	tgagcgtatg	anagacaccg	gagttgatgt	tatagggcta	gactggacag	180
tggatatggc	agatggaaga	agaagattgg	gtagtgggat	aggtgttcag	ggaaatgtgg	240
accctgccta	cttattctcc	cctcttgatg	ccctgactga	ag		282

<210> 135  
 <211> 256  
 <212> DNA  
 <213> Glycine max  
  
 <400> 135

gggggatcct	gttagtcgtc	ctccggcatg	gatgatgcgc	caggccggaa	ggtacatggc	60
tgtttacaaa	aagcttgctg	agaaatatcc	atccttccga	gagaggtcag	agacaactga	120
tctcattgtg	gaaatttctt	tgacgccttg	gaatgctttc	aggcctgatg	gagtaattat	180
cttctcggac	atccttacac	cacttcctgc	gtttggagtt	gattttgaca	tagaagaagt	240
aaggggacct	gttata					256

<210> 136  
 <211> 386  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 136

ttcaggctca gccgcatagt taaggaaccg aaactccaca taggaatcac ttggttttctt 60  
 tgctctcccc caacccaatg gctacttcca ttaacagcag tgctctgggg tggaacatt 120  
 catccttctt cgtacaatcc aataatgggt tcaacgttgc ttgcctctct ttcaaaccaa 180  
 agccgncacg ctctccaac ttttctctct attgctctgc cgctctctct tcttctgac 240  
 cactgttggt taaggctgct aggggagatc ctgttagtgc tctccagca tggatgatgc 300  
 gccaggcagg aaggtacatg gctgtttaca aaaatcttgc tgagaaatat ccctcttcc 360  
 gagagaggtc agagacaact gaactc 386

<210> 137  
 <211> 291  
 <212> DNA  
 <213> Glycine max

<400> 137

aggttttaca tccaattgac ctggacaggc ttaaatttgt tggagattca ctaaagatac 60  
 tgcgccaaga ggttggtggt catgcagctg ttttgggttt tgtgggagca cttgggacaa 120  
 tagcaacata tatagtggaa gggggtacaa cacgcacata tacaaccatt aagagcatgt 180  
 gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg 240  
 attacgttat tttccaagtg gagtctgggg ctcatgcat acaaatttt g 291

<210> 138  
 <211> 288  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 138

gcgccaagag gttggtggtc atgcagctgt tttgggtttt gtgggagcac cttgggacaa 60  
 tagcaacata tatagtggaa gggggtacaa cacgcacata tacaaccatt aagagcatgt 120  
 gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg 180  
 attacgttat tttccaagtg gagtctgggg ctcatgcat acaaatttt gattcatgnc 240  
 ngtggaacat accacctgaa atgtgggaac gctgggtcaaa gccttata 288

<210> 139  
 <211> 261

<212> DNA  
 <213> Glycine max  
 <400> 139  
 aaagatactg cgccaagagg ttggtggtca tgcagctgtc ttgggttttg tgggagcacc 60  
 ttggacaata gcaacatata tagtggaagg ggggtacaaca cgcacatata caaccattaa 120  
 gagcatgtgc cacactgccc cacatgtatt gaggactttg ctttctcatt tgacgcaggc 180  
 aatagctgat tacgttattt tccaagtga gtctggggct cattgcatac aaatattaga 240  
 tcatggggtg gacaactacc a 261

<210> 140  
 <211> 213  
 <212> DNA  
 <213> Glycine max  
 <400> 140  
 gacaatagca acatatatag tggaaggggg tacaacacgc acatatataa ccattaagag 60  
 catgtgccac actgccccac atgtattgag gactttgctt tctcatttga cgcaggcaat 120  
 agctgattac gttatatttc aagtggagtc tggggctcat tgcatacaaa tatttgattc 180  
 atggggtgga caactaccac ctgaaatgtg gga 213

<210> 141  
 <211> 236  
 <212> DNA  
 <213> Glycine max  
 <400> 141  
 tggtgaaaga cccccggttt ggctcatgag gcaagcaggg aggtacatga agagttacca 60  
 aaccatctgt gagaaatata cttcattccg tgaaagatct gaaaatgttg atctcgtggg 120  
 ggaaatttct ctgcaacat ggcatgtttt taagcccgat ggagtgattt tattctcaga 180  
 cattcttacc ccactttctg gaatgaatat accctttgat attgtgaagg gtaagg 236

<210> 142  
 <211> 263  
 <212> DNA  
 <213> Glycine max  
 <400> 142

tttggctcat gaggcaagca gggaggtaca tgaagagtta ccaaaccatc tgtgagaaat 60  
 atccttcatt ccgtgaaaga tctgaaaatg ttgatctcgt ggtggaaatt tctctgcaac 120  
 cgtggcatgt tttcaagcct gatggagtga ttttattctc agacattctt accccacttt 180  
 ctggaatgaa tatacccctt gatattgtga agggtaaggg tcctgttata tttgatccta 240  
 ttcacacatc tgcccagggt gat 263

<210> 143  
 <211> 258  
 <212> DNA  
 <213> Glycine max

<400> 143

gcttttgcta aatgcagttc gcgggataga tggtgaaaga cccccggttt ggctcatgag 60  
 gcaagcaggg aggtacatga agagttacca aaccatctgt gagaaatata cttcattccg 120  
 tgaaagatct gaaaatgtga tctcgtggtg gaaatttctc tgcaaccgtg gcatgttttc 180  
 aagcctgatg gagtgatttt attctcagac attcttacc cactttctgg aatgaatata 240  
 ccctttgata ttgtgaag 258

<210> 144  
 <211> 262  
 <212> DNA  
 <213> Glycine max

<400> 144

caaacatgct ttgcgtcaac actgccttca cctctttctt gccagaaaa tcaatttgct 60  
 tcttttctc caaatcaacc accccaattt cctgcaccct ccaaggaaca gttgcagaac 120  
 caaaatctac agctgctggt gaacctcttt tgctaaatgc agttcgtggg atagatgttg 180  
 aaagaccccc ggtttggtc atgaggcaag caggaggta catgaagagt taccaaacca 240  
 tctgtgagag atatccttca tt 262

<210> 145  
 <211> 283  
 <212> DNA  
 <213> Glycine max

<400> 145

acttggttatc tatacagatg ttgcattaga tccttattca tcagatgggc atgatggcat 60  
 agttagagaa gatggagtta ttatgaatga tgagacagtt catcagctat gtaaacaagc 120  
 tgtagcccgag gcccaagctg gagcagatgt tgtccagtct agtgatatga tggatggctg 180  
 ggtaggagca ctgcgtgcag ctctggatgc tgaaggcggt cagcatgtat ctataatgtc 240  
 ctatacagca aagtatgcaa gttcttttta tgggtccattt aga 283

<210> 146  
 <211> 316  
 <212> DNA  
 <213> Glycine max

<400> 146

ctgagatgcg ggaggatgaa tctgaaggag ctgacattct cttggtgaag cctgggtcttc 60  
 cttacttgga tatcataagg ctgctcaggg ataattctcc tttgccaatt gcagcatacc 120  
 aggtttctgg tgaatatgca atgataaagg ctgccgggtgc tctcaaatg atagacgaag 180  
 aaaaggttat gatggagtca ctgatgtgcc tccgaagggc cgggtgctgat atcatcctca 240  
 catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagagtga gttctctgat 300  
 tatgtagggc gttggt 316

<210> 147  
 <211> 271  
 <212> DNA  
 <213> Glycine max

<400> 147

tcgccggtaa ggttccgccg gcgcctcccg tgccgccag accggcggct cccggttgga 60  
 acaccggtgg ttccttcaact tccacaccac cggcgctctc gtcggaaccg gaagtcgccg 120  
 gcgcttcggt cggtttttca ggaaacgagc atttcgccgg cgaatttcgt gtatccgctt 180  
 ttcattcacg aaggatgaaga ggatactcca attggggcta tgctgggatg ctacaggctt 240  
 ggggtggaggc atggacttgt agaagagggtt g 271

<210> 148  
 <211> 275  
 <212> DNA  
 <213> Glycine max

<223>        unsure at all n locations  
 <400>        148

aagcctgggtc ttccttactt ggatatcata agtctgctca gggataattc tcctttgcc 60  
 attgcagcat accaggttct tttctttgcc cattctagca ctaggcaaaa cgtttctgat 120  
 aaaaagttga tcagatattc aatacatttt aaccagtgga attctgcntt aagcttgctg 180  
 caagtgcagc angtctatac gtagtagaca aatatcacac ctctagttta atatcaggct 240  
 gaggtacaag tttatgggtg ctttaacagt tattg 275

<210>        149  
 <211>        191  
 <212>        DNA  
 <213>        Glycine max

<223>        unsure at all n locations  
 <400>        149

ccggtgctga tatcatcctc acatattctg ctctgcaagc tgccagatgt ttgtgtggag 60  
 agaagaggtg aagttctctg attatgcagg gcgttggttca tgtagaaggt tgaagagttt 120  
 anaaanccca gtnccggngn tncgggnnt cnnaaaattt taaaagggnc cccgcggttt 180  
 ntcnaaaang a 191

<210>        150  
 <211>        250  
 <212>        DNA  
 <213>        Glycine max

<400>        150

aggagatgaa gcatacagtg aaaatggttt agtgcctcgg acaatacgtt tgctcaagga 60  
 taagttacca gaccttggtg accaatccag aggtggaata aaatcctaata ccgtcagatg 120  
 ggcatgatgg catagtaaga gaagatgaag taataatgat tatgagacag gtcacagcc 180  
 atggtaacaa gctgtagacc aaggccaagc tggagcagat gttgtcagtc ctagtgatat 240  
 gatggatggt 250

<210>        151  
 <211>        357  
 <212>        DNA  
 <213>        Glycine max

<400> 151

acggctgcga caagacgaga taatgtggct gattggtaac gtagtgaatc ctgtgcatac 60  
atccgctcgt agcctcttcc tgcgactctc ttctcagtgg gtctccgtat tctccctcaa 120  
tctattaac cttttcttct ttcatttccc accccattct ataatcaatc agtgtcaatg 180  
gcttcttcaa tcgctaatgc gccttctgog ttcaattctc agtactactt tggctctcaga 240  
acgccactga ggtccttcaa cttttcttct cctcaagctg ccaaacttcc acgctcgcac 300  
tgccttttctg tcgtcagagc ctccgattcg gtcttcgaaa ccgccgttgt cgccggt 357

<210> 152

<211> 418

<212> DNA

<213> Glycine max

<400> 152

agcccaggcg tcagtacggc tgcgagaaga cgacagaagg ggatgggtga ctgggtgttt 60  
tttaaattgc atgaaacatt tatttgttct tatagaaaaa gttacaagta agtcttcact 120  
gcaagtagaa gatattggat ccagttccag ggttgaactc catacgatta ttttttaata 180  
gaaaaattga ctgtgacgta gctgtggagg acacgattgg taaagtattg aatccttcct 240  
gcgactcttt tctcattggc tcaactgtgt ctccaaacac atctcagaat ctcttgatt 300  
attattcaat caatcaatgg cttcttcaat ccctaattga cctccctctg cgttgaattc 360  
ccagttctac gatgatctca gaccgccaca gaggacctc aacttttcct ttcttcaa 418

<210> 153

<211> 243

<212> DNA

<213> Glycine max

<400> 153

agcccaagcg tcagtacagc tgcgagagga ggacagaagg ggattctaca atcaatcaat 60  
ggcaatggct tcacatcaatc ctaatgcgcc ttctgcgttc aattctcaaa gctacgttgg 120  
tctcaggtcg ccaactgagga ctttcaactt ttcttctcct caaggtggca aaaatcctcg 180  
ctcccaacgc cttttcgacg tcagagcctc cgaatccgag ttccaagccg ccgttgtccc 240  
cgg 243

<210> 154  
 <211> 277  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 154

cgcagtcnga ggancctcca cagatatnca nctcttaatg tgcaggaana tttccgnggc 60  
 aatgtcnana caagggttaan aaagctcaat gaggggggttg tccaagctac actattagca 120  
 ttnnctggac tcaaacgctt aatatgacag anaatgtgac ttcaatccta tcantagatg 180  
 atatgcttcc agctgttgnc caaggtgcc a ttggaattgc ctgtagaagt gatgnnnata 240  
 anatggcaga atacattgat tcacttaatc atganga 277

<210> 155  
 <211> 285  
 <212> DNA  
 <213> Glycine max

<400> 155

tatgagatga agcatacagt gaaaatggtt tagtgccctcg gacaatacgt ttgctcaagg 60  
 ataagtaccc agaccttggt atctatacag atgttgcat agatccttat tcgtcagatg 120  
 ggcattgatgg catagttaga gaagatggag ttattatgaa tgatgagaca gttcatcagc 180  
 tatgtaaaca agctgtagcc caggcccaag ctggagcaga tgttgctcagt cctagtgata 240  
 tgatggatgg tcgggtagga gcactgcgtg cagctcttga tgctg 285

<210> 156  
 <211> 275  
 <212> DNA  
 <213> Glycine max

<400> 156

acggctgcga gaagacgaca gaaggggatg ctttgaagtc tcccacagga gatgaagcat 60  
 acaatgaaaa tgggttagtg cctcgaacaa tacgtttgct caaggataag taccagacc 120  
 ttgttatcta tacagatggt gcattagatc cttattcatc agatgggcat gatggcatag 180  
 ttagagaaga tggagttatt atgaatgatg agacagttca tcagctatgt aaacaagctg 240



tagcccaggc ccaagctgga gcagatgttg tcagt 275

<210> 157  
 <211> 262  
 <212> DNA  
 <213> Glycine max

<400> 157

ttttagtctc ccacaggaga tgaagcatac aatgaaaatg gtttagtgcc tcgaacaata 60  
 cgtttactca aggataagta cccagacctt gttatctata cagatgttgc attagatcct 120  
 tattcatcag atgggcatga tggcatagtt agagaagatg gagttattat gaatgatgag 180  
 acagttcatc agctatgtaa acaagctgta gcccagggtca tatgactgtc ttctataaac 240  
 attttcaact gtaggcagtt ac 262

<210> 158  
 <211> 289  
 <212> DNA  
 <213> Glycine max

<400> 158

gaaaagggtta tgatggagtc actgatgtgc ctccgaaggc cgggtgctgat atcatcctca 60  
 catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagagggtga agttctctga 120  
 ttatgtaggg cgttgttcat gtagaagggtt gaagagttta taataccagt atctgctgga 180  
 ttttggttat tgtaaattgt ttaagaggga catggagggtt tgtgtataga gagacattca 240  
 taataaaata ttatggcctc gtttgattta atatatgtaa ggacataat 289

<210> 159  
 <211> 255  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 159

ggttatgatg gagtcactga tgtgcctccg aagggccggt gctgatatca tctcacata 60  
 ttctgctctg caagctgcc aatggtttgtg tggagagaag aggtgaagtt ctctgattat 120  
 gtagggcggt gttcatgtag aaggttgaag agtttataat accagtatct gctggatttt 180  
 ggttattgta aattgtttaa gagggacatg gngggtttgtg tatagagaga cattccta 240

taaatattag ggccc

255

<210> 160

<211> 262

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 160

tcgggtaggn gcactgctg cagctctgga tgctgaaggc tttcagcatg tttctataat 60

gtcctataca gcaaagtatg caagttcttt tnatggcca tttagagagg cactagactc 120

aaacccccgg tttggagaca agaaaactta tcagatgaac ccagctaatt acagagaggc 180

tctgactgag atgcgggagg atgaatctga aggagctgac attctcttgg tgaagcctgg 240

tcttccttac ttggatatca ta 262

<210> 161

<211> 253

<212> DNA

<213> Glycine max

<400> 161

gacagttcat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60

cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120

aggctttcag catgtttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180

tccatttaga gaggcactag actcaaaccc ccggtttgga gacaagaaaa cttatcagat 240

gaaccagct aat 253

<210> 162

<211> 249

<212> DNA

<213> Glycine max

<400> 162

gttgctcagtc ctagtgatat gatggatggt cgggtaggag cactgctgctc agctctggat 60

gctgaaggct ttcagcatgt ttctataatg tcctatacag caaagtatgc aagttctttt 120

tatgggccat ttagagaggc actagactca aacccccggt ttggagacaa gaaaacttat 180

cagatgaacc cagctaatta cagagaggct ctgactgaga tgcgggagga tgaatctgaa 240  
ggagctgac 249

<210> 163  
<211> 248  
<212> DNA  
<213> Glycine max

<400> 163

gacagtccat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60  
cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120  
aggctttcag catgtttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180  
tccatttaga gaggcactag actcaaacc cgggtttgga gacaagaaaa cttatcagat 240  
gaacccag 248

<210> 164  
<211> 414  
<212> DNA  
<213> Glycine max

<400> 164

acccacgcgt ccgtacggct ggagaagacg acagaagggg attctataat caatcaatgg 60  
caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa ttctcagagc tacgttggtc 120  
tcagagcgcc actgaggacc ttcaactttt cttctcctca agctgcaaaa attcctcgct 180  
cccaacgcct tttcgtcgtc agagcctccg attcggagtt cgaagccgcc gttgtcgccg 240  
gtaagggttc gccggcgctt cccgtgccgc ccagaccggc ggctccggtt ggaacaccgg 300  
tggttccttc acttccactt caccggcgtc ctcgtcgga cgggaagtcg ccggcgcttc 360  
ggtcggcttt tcaggaaacg agcatttcgc cggcgaattt cgtgtatccg cttt 414

<210> 165  
<211> 394  
<212> DNA  
<213> Glycine max

<400> 165

tacggctgcg agaagacgac agaaggggat aatcaatcaa tggcaatggc ttcttcaatc 60

cctaatagcgc cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg 120  
accttcaact tttcttctcc tcaagctgcc aaaattcttc gctcccaacg ctttttcgtc 180  
gtcagagcct ccgattcgga gttcgaagcc gccgttgctg ccggttaagg tccgccggcg 240  
cctcccgtag cgcccagacc ggccggctccg gttggaacac cgggtggttc ttcacttcca 300  
cttcaccggc gtctctgctg gaaccggaag tcgccggcgc ttcggtcggc ttttcaggaa 360  
acgagcattt cgccggcgaa tttcgtgtat ccgc 394

<210> 166  
<211> 283  
<212> DNA  
<213> Glycine max  
<223> unsure at all n locations  
<400> 166

gctttttcaa tccctaatagc gccttctgctg ttcaattctc agagctacgt tgggtctcaga 60  
gcgccactga ggaccttcaa cttttcttct cctcaagctg ccaaaattcc tcgctcccaa 120  
cgccttttcg tcgtcagagc ctccgattcg gagttcgnag ccgccgttgt cgccggtaag 180  
gttcncccg gcctcccggt gccgccaga ccggcggtc cgggttgaac accggtggtt 240  
ccttcacttc cacttcaccg gcgtcctcgt cggaaccgga agt 283

<210> 167  
<211> 286  
<212> DNA  
<213> Glycine max  
<223> unsure at all n locations  
<400> 167

aatccctaata gcgccttctg cgttcaattc tcagagctac gttggtctca gagcgccact 60  
gaggaccttc aacttttctt ctctcaagc tgccaaaatt cctcgctccc aacgcctttt 120  
cgtcgtcaga gcctccgatt cggagtctga agccgncgtt gtcgccggtg aggttccgcc 180  
ggngcctccc gtnccgccca gaccggcggc tccggttga acaccggtgg ttccttcact 240  
tccacttcac cggcgtcttc gtcggaaccg gaagtcgctg cgcttt 286

<210> 168  
<211> 278  
<212> DNA

<213> Glycine max

<400> 168

```
cttcaatccc taatgcgcct tctgcgttca attctcagag ctacgttggt ctcagagcgc 60
cactgaggac cttcaacttt tcttctcttc aagctgccaa aattcctcgc tcccaacgcc 120
ttttcgtcgt cagagcatcc gattcggagt tcgaagccgc cgttgtcgcc ggtaaggttc 180
cgccggcgcc tcccgtgccg cccagaccgg cggctccggt tggaacaccg gtggttcctt 240
cacttcact tcaccggcgt cctcgtcgga accggaag 278
```

<210> 169

<211> 268

<212> DNA

<213> Glycine max

<400> 169

```
ggcttcttca atccctaatt gcgcttctgc gttcaattct cagagctacg ttggtctcag 60
agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120
acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtta 180
ggttccgccg gcgcctcccg tgccgccag accggcggct ccggttgga caccggtggt 240
tccttcactt ccacttcacc ggcgtcct 268
```

<210> 170

<211> 356

<212> DNA

<213> Glycine max

<400> 170

```
attgaatcct gtgcatacat cctcacttat cctcttcttg cgactctctt ctcattgggt 60
ctccgtattc tccctcaatc ctattaacct tttcttcttt catttccac cccattctat 120
aatcaatcaa tggcaatggc ttcttcaatc cctaattgcgc cttctgcgtt caattctcag 180
agctacgttg gtctcagagc gccactgagg accttcaact tttcttctcc tcaagctgcc 240
aaaattcctc gctcccaacg ctttttcgtc gtcagagcct ccgattcgga gttcgaagcc 300
gccgttgctg ccggtaagggt tccgcggcg cctcccgtgc cgcccagacc ggcggc 356
```

<210> 171

<211> 287  
 <212> DNA  
 <213> Glycine max

<400> 171

```
gctttcttcaa tccctaattgc gccttctgct gttcaatgtc tcgagagctc acgttcgggt 60
ctccagcagc gaccacttgc aggacgcttg cagacgtttt gcttagctcc tacgaagctt 120
ggcgcaaata ttgcctgcgc taccatacgc ctttttacgt cgtcagagcc tccgattcgg 180
agttcgaagc cgccgttgtc gccggtaagg ttccgccggc gcctcccgtg ccgccagac 240
cggcggtcc ggttggaa cgggtggttc cttcacttc acttcac 287
```

<210> 172  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<400> 172

```
atggcaatgg cttcttcaat ccctaattgc cttctgct tcaattctca gagctacgtt 60
ggtctcagag cgccactgag gaccttcaac tttctctc ctcaagctgc caaaattcct 120
cgctcccaac gccttttctg cgtcagagcc tccgattcgg agttcgaagc cgccgttgtc 180
gccggtaagg ttccgccggc gcctcccgtg ccgccagac cggcggtcc ggttggaa 240
ccggtggttc cttcacttc 259
```

<210> 173  
 <211> 258  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 173

```
ggcttcttca atccctaatt gccttctgct gttcaattct cagagctacg ttggtctcag 60
agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctgcctcca 120
acgccttttc gtgcgcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180
ggttcgcgcg gcgcctcccg tgnccgccag accggcggt cgggttgaa caccggtggt 240
tccttcattc cattcacc 258
```

<210> 174  
 <211> 234  
 <212> DNA  
 <213> Glycine max  
  
 <400> 174  
  
 ggctttcttca atccctaata cgcctttctgc gttcaattct cagagctacg ttggtctcag 60  
 agcgccactg aggaccttca actttttcttc tcctcaagct gccaaaattc ctcgctccca 120  
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180  
 ggttcgcgcg gcgcctcccg tgccgcccag accggcggct ccggttgga cacc 234

<210> 175  
 <211> 251  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 175  
  
 gctttcttcaa tccctaatagc gcctttctgcg ttcaattctc agagctacgt ttggtctcaga 60  
 gcgccactga ggaccttcaa cttttcttct cctcaagctg ccaaaattcc tcgctcccaa 120  
 cgccttttcg tcgtcagagc ctccgattcg gagttcgang ccgccgttgt cgccggtnag 180  
 gttccgcgcg cgcttcccg nccgcccaga ccggcggctc cggttggaac aaccggtggt 240  
 tccttcactt c 251

<210> 176  
 <211> 279  
 <212> DNA  
 <213> Glycine max  
  
 <400> 176  
  
 atccctaata cgcctttctgc gttcaattct cagagctacg ttggtctcag agcgccactg 60  
 aggaccttca actttttcttc tcctcaagct gccaaaattc ctcgctccca acgccttttc 120  
 gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa ggttcgcgcg 180  
 gcgcctcccg tgccgcccag accggcggct ccggttgga caccggtggt tccttcactt 240  
 ccacttcacc ggcgtcctcg tcggaaccgg aagtcgcgcg 279

<210> 177

<211> 266  
 <212> DNA  
 <213> Glycine max

<400> 177

```

ggctttcttca atccctaata cgctttctgc gttcaattct cagagctacg ttggtctcag   60
agcgccactg aggaccttca actttttcttc tctcaagct gccaaaattc ctgctccca  120
acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggttaa  180
ggttcgcgcg gcgcctcccg tgcgcccag accggcggct ccggttgga caccggtggt  240
tccttcactt ccacttcacc ggcgtc                                     266
  
```

<210> 178  
 <211> 287  
 <212> DNA  
 <213> Glycine max

<400> 178

```

atcctattaa cctttttcttc ttctatttcc cacccttcc tatagtcaat caatggcaat   60
ggctttcttca atccctaata cgctttctgc gttcaattct cagagctacg ttggtctcag  120
agcgccactg aggaccttca actttttcttc tctcaagct gccaaaattc ctgctccca  180
acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggttaa  240
ggttcgcgcg gcgcctcccg tgcgcccag accggcggct ccggttg                                     287
  
```

<210> 179  
 <211> 236  
 <212> DNA  
 <213> Glycine max

<400> 179

```

caatggcaat ggctttcttca atccctaata cgctttctgc gttcaattct cagagctacg   60
ttggtctcag agcgccactg aggaccttca actttttcttc tctcaagct gccaaaattc  120
ctgctccca acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg  180
tcgccggtac agttccgcg gcgctcccg gccgcccaga ccggcggctc cggttg          236
  
```

<210> 180  
 <211> 395  
 <212> DNA



<213> Glycine max

<223> unsure at all n locations

<400> 180

```
tacgggatgcg agaagacgac agaaggggga ttggtaaagt attgaatcct gtgcatacat 60
cctcacttat cctcttcctg cgactctctt ctcatctggtt ctccgtattc tccctcaatc 120
ctattaacct tttcttcttt catttccac cccattctat aatcaatcaa tggcaatggc 180
ttcttcaatc cctaagcgcg cttctgcgtt caattctcag agctacgttg gtctcagagc 240
gccactgagg accttcaact tttcttctcc tcaagctgcc aaaattcctc gctcncaacg 300
ccttttcgtc gtcagagcct ccgattcgga gttcgaagcc gccgttgctg ccggtaagggt 360
tccgccggcg cctcccgtgc cgcccagacc ggccgg 395
```

<210> 181

<211> 227

<212> DNA

<213> Glycine max

<400> 181

```
tggcttcttc aatccctaata ggccttctg cgttcaattc tcagagctac gttggtctca 60
gagcgccact gaggaccttc aacttttctt ctctcaagc tgccaaaatt cctcgctccc 120
aacgcctttt cgtctcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180
ggttccgccg ggcctctccg tgccgccag accggcggct ccggttg 227
```

<210> 182

<211> 271

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 182

```
ggcttcttca atccctaata ggccttctg gttcaattct cagagctacg ttggtctcag 60
agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120
acgccttttc gtcgtcagag cctccgattc ggagttcgaa gcagccgttg tcgccggtaa 180
ggttccgccg gngcttcnt gccgnacaga ccggcgggtc cngttggnac aacggtggtt 240
ccttaattcc actnancggc gtccntcng a 271
```

<210> 183  
 <211> 256  
 <212> DNA  
 <213> Glycine max

<400> 183

cggtctcgaga aaattgactg tcacgtagct gaagctgatt gagctacgtt ggtctcagag 60  
 cgccactgag gaccttcaac ttttcttctc ctcaagctgc caaaattcct cgctcccaac 120  
 gccttttcga cgtcagagcc tccgattcgg agttcgaagc cgccggtgtc gccggtaagg 180  
 ttccgccggc gcctcccggtg ccgcccagac cggcgggtcc ggttggaaca ccggtgggtc 240  
 cttcacttcc atttca 256

<210> 184  
 <211> 246  
 <212> DNA  
 <213> Glycine max

<400> 184

accttgtctt ctttcatttc ccaccccatt ctataatcaa tcaatggcaa ttgcttcttc 60  
 aatccctaata gcgccttctg cgttcaattc tcagagctac gttgggtctca gagcgccact 120  
 gaggaccttc aactttgctt ctctcaagc tgccaaaatt cctcgctccc aacgcctttt 180  
 cgtcgtcaga gcctccgatt cggagttcga agccgcggtt gtcgccggta agttccgccg 240  
 gcgctt 246

<210> 185  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<400> 185

cgactctctt ctcatgtgtt ctccgtatcc tccctcaatc ctattaacct tttcttcttt 60  
 catttcccaac ccattctat aatcaatcaa tggcaatggc ttcttcaatc cctaattgcg 120  
 cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg accttcaact 180  
 tttcttctcc tcaagctgcc aaaattcctc gctcccaacg ctttttcgtc gtcagagcct 240  
 ccgattcggg gtt 253

<210> 186  
 <211> 148  
 <212> DNA  
 <213> Glycine max

<400> 186

ctgcgttcaa ttctcagagc tacgttggtc tcagagcgcc actgaggacc ttcaactttt 60  
 cttctctca agctgccaaa attcctcgct cccaacgcct tttcgtcgct agagcctccg 120  
 attcggagtt cgaagccgcc gttgtcgc 148

<210> 187  
 <211> 271  
 <212> DNA  
 <213> Glycine max

<400> 187

cggctcgagg ctgaagctga ttggtaaagt attgaatcct gtgcatacat cctcacttat 60  
 cctcttctctg cgactctctt ctcatgtggt ctccgtattc tccctcaatc ctattaacct 120  
 tttcttcttt catttccac ccattctata atcaatcaat ggcaatggct tcttcaatcc 180  
 ctaatgcgcc ttctgcgttc aattctcaga gctacgttgg tctcagagcg ccactgagga 240  
 ccttcaactt ttcttctcct caagctgcca a 271

<210> 188  
 <211> 104  
 <212> DNA  
 <213> Glycine max

<400> 188

atggcttctt caatccctaa tgcgccttct gcgttcaatt ctcagagcta cgttggtctc 60  
 agagcgccac tgaggacctt caacttttct tctctcaag ctgc 104

<210> 189  
 <211> 64  
 <212> DNA  
 <213> Glycine max

<400> 189

agcttcttca atccctaag cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcg

64

<210> 190  
<211> 266  
<212> DNA  
<213> Glycine max

<400> 190

tcggctcact cgagcgaatc ggctcaggaa aattgactgt gacgtagcac atcctgattg 60  
gtaaaactatt gaatcctgtg catacatcct cacttatacct cttcctgcga ctctcttctc 120  
cttggttctc cgtattctcc ctcaatccta ttaacctttt cttctttcat ttcccacccc 180  
attctataat caatcaatgg caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa 240  
ttctcagagc tacgttggtc tcagag 266

<210> 191  
<211> 264  
<212> DNA  
<213> Glycine max

<400> 191

ctcatataga aaattgactg tgacgttgct gaagctgatt ggtaaagtat tgaatcctgt 60  
gcatacatcc tcacttatcc tcttcctgcg actctcttct cattgggttct ccgtattctc 120  
cctcaatcct attgaccttt tcttctttca ttcccacccc cattctataa tcaatcaatg 180  
gcaatggctt cttcaatccc taatgcgcct tctgcgttca attctcagag ctacgttggt 240  
ctcagagcgc cactgaggac cttc 264

<210> 192  
<211> 335  
<212> DNA  
<213> Glycine max

<223> unsure at all n locations  
<400> 192

atatgctnnc cagctgttgc ccaaggtgcn attggaatag cctgtagaag taacgatgat 60  
aaaatgnnca gaatacctcn ncttcattga atcatgaaga aacaagacta gcagtttgc 120  
gtgaaagagc cttccttgan aagtagaagg atntgccgna nctattgca ggctatgcta 180  
gcagaaacga ggatggcaat tgcttgttta gaggatagtt gcttcccctg atggaacccg 240

cggtgctcgaa actccagaat ggttcanatg ctttcgaaga tatgataaag atgggtaaga 300  
 tgctggagag gagctctttc tcgagctgac ntgct 335

<210> 193  
 <211> 257  
 <212> DNA  
 <213> Glycine max

<400> 193

gaacagcgaa atcgacatcg ctgtccattc gatgaaggat gttcctactt acttgcttga 60  
 taaaacaatt ctgccatgta accttccgcg agaggatgtc agagatgcat ttatatacctt 120  
 gactgcagct tccttagctg atcttcccc tgcaagtgtt attggtactg cttcggttaag 180  
 gcgaaagtca cagatcctcc acagatatcc atctcttaat gtgcaggaaa atttccgtgg 240  
 caatgtccaa acaaggt 257

<210> 194  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 194

cgtttaaata tgacggaaaa tgtgacttcg atcctatcaa ttgatgacat gcttccagct 60  
 gttgcccaag gtgcaattgg aatagcctgt agaagtaatg atgataaaat ggcggaatac 120  
 cttgcttcac tgaatcatga agaaacaaga ctagcagttt cctgcgaaag angcttcctt 180  
 gaaaagttgg aagggtctgc cgcactccta ttgcaggcta tgctagcaga aatgaggatg 240  
 gcaattgctt gtttagagga ttagttgca 269

<210> 195  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<400> 195

tgatgataaa atggcggaat accttgcttc actgaatcat gaagaaacaa gactagcagt 60  
 ttctgtgtaa agatccttcc ttgaaaagtt ggaaggggtct tgccgcactc ctattgcagg 120

ctatgctagc agaaatgagg atggcaattg cttgtttaga ggattagttg catccccctga 180  
 tggaatccgt gtgcttgaaa cttccagaat tggcccatat gcgttcgcag atatgataaa 240  
 gatgggtaag gatgctgga 259

<210> 196  
 <211> 205  
 <212> DNA  
 <213> Glycine max

<400> 196

cttaagtatg acagaaaaatg tgacttcaat cctatcaatt gatgatatgc ttccagctgt 60  
 tgcccaaggt gctattggaa tagcatgtag aagtgatgac gataaaatgg cggaatacat 120  
 tgctacactt aatcatgaag aaacaagact agcagttgtc tgtgagaggg cttttcttca 180  
 gactttggat gggctctgccg cactc 205

<210> 197  
 <211> 271  
 <212> DNA  
 <213> Glycine max

<400> 197

ctgcttcggt aaggcgaaag tcacagatcc tccacagata tccatctctt aatgtgcagg 60  
 aaaatttccg tggcaatgtc caaacaaggt taagaaaact caatgagggg gttgtccaag 120  
 ctacactatt agcattagct ggactcaaac gcttaagtat gacagaaaat gtgacttcaa 180  
 tcctatcaat agatgatatg cttccagctg ttgcccaagg tgccattgga attgcctgta 240  
 gaagtgatga cgataaaatg gcagaataca t 271

<210> 198  
 <211> 287  
 <212> DNA  
 <213> Glycine max

<400> 198

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60  
 catgaagaaa caaggctagc agttgtctgt gaaagggcct ttcttcagac tttggatggg 120  
 tcttgccgca ctctattgc agggtatgct tgtagaaacg aggatggcaa ttgtttgttt 180

agaggattag ttgcttcccc tgatggaacc agagtgctag agacatccag ggttgggtcca 240  
 tatgctgttg aagatatgat tgagatgggt aaggatgctg gcaagga 287

<210> 199  
 <211> 276  
 <212> DNA  
 <213> Glycine max

<400> 199

attggaatt gctgtagaa gtgatgacga taaaatggca gaatacattg attcacttaa 60  
 tcatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttggatgg 120  
 gtcttgccgc actcctattg cagggtatgc ttgtagaaac gaggatggca attgtttggt 180  
 tagaggatta gttgcttccc ctgatggaac cagagtgcta gagacatcca gggttgggtcc 240  
 atatgctgtt gaagatatga ttgagatggg taagga 276

<210> 200  
 <211> 285  
 <212> DNA  
 <213> Glycine max

<400> 200

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60  
 ccatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttggatgg 120  
 gtcttgccgc actcctattg cagggtatgc ttgtagaaac gaggatggca attgtttggt 180  
 tagaggatta gttgcttccc ctgatggaac cagagtgcta gagacatcca gggttgggtcc 240  
 atatgctgtt gaagatatga ttgagatggg taaggatgct ggcaa 285

<210> 201  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<400> 201

gtgaaagggc ctttcttcag actttggatg ggtcttgccg cactcctatt gcaggggatg 60  
 cttgtagaaa cgaagatggc aattgtttgt ttagaggatt agttgcttcc cctgatggaa 120  
 ccagagtgct agagacatcc agggttgggtc catatgctgt tgaagatatg attgagatgg 180

gtaaggatgc tggcaaggag cttctgtctc gggctggacc taacttcttc agtagttagc 240  
 agcagatgat taaagtgtg 259

<210> 202  
 <211> 285  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 202

gcagacagaa gcgaacgnaa cggggttgcc tcaacaattc gctgttggtg ttctcttctc 60  
 ttctctttga catgaatact ctttcttcca cgctccatgg cggcaggctt ccccgctcag 120  
 cttcgaaaac caaaaccgca tctctctcca aatgccatcg catttggtgc accaaagctt 180  
 ctgttgccgt tgagcaacaa actaaggctg ctctcatcag aattggtacc agaggaagtc 240  
 cactagctct agcacaagca tatgagacca gagacaaact catgg 285

<210> 203  
 <211> 282  
 <212> DNA  
 <213> Glycine max

<400> 203

agcagacaga agcgagcgaa acgggggttgcc ctcaacaatt cgctgttggt gttctcttct 60  
 cttctctttg acatgaatac tctttcttcc acgctccatg gcgggaggct tccccgctca 120  
 gcttcgaaaa ccaaaaccgc atctctctcc aaatgccatc gcatttggtg caccaaagct 180  
 tctgttgccg ttgagcaaca aactaaggct gctctcatca gaattggtac cagaggaagt 240  
 ccactagctc tagcacaagc atatgagacc agagacaaac tc 282

<210> 204  
 <211> 251  
 <212> DNA  
 <213> Glycine max

<400> 204

ccgaacgaaa cggggttgcc tcaacaattc gctgttggtg ttctcttctc ttctctttga 60  
 catgaatact ctttcttcca cgctccatgg cgggtggctt ccccgctcag cttcgaaaac 120  
 cacaaccgca tctctctcca aatgccatcg catttggtgc accaaagctt ctgttgccgt 180



tgagcaacaa actaaggctcg ctctcatcag aattggtacc agaggaagtc cactagctct 240  
 agcacaagca t 251

<210> 205  
 <211> 327  
 <212> DNA  
 <213> Glycine max

<400> 205

atcggcaagg taaggcaatt gaagttgtga aatggagact gtctgctctg cattggtggt 60  
 cccatctttc agaatcacaa cttcagcttt ctccaaatgt ggcacacagg cttccattgc 120  
 cgttgagcaa caaacttcgc agactaaggt tgctctcttc aaaattggta ccagaggaag 180  
 tccactagct ctggctcagg catatgagac cagagacaag ctcatggcat cacatccaga 240  
 gctagcggaa gaaggggcta ttcagattgt gataatgaaa acaactgggtg acaaaatact 300  
 atcacagcca cttgcagaca tcggcgg 327

<210> 206  
 <211> 390  
 <212> DNA  
 <213> Glycine max

<400> 206

gaaatggaga ctctctgctc tgcattgggtg ttcccatctt tcagaatcac aacttcagct 60  
 ttctccaaat gtggcatcag ggctttcatt gccgttgagc aacatacttc gcagactaag 120  
 gttgctctcc tcaaaattgg taccagagga agtcactag ctctgggtca tgcatatgag 180  
 accagagaca atctcatggc atcacatcca gagctagcgg atgaaggggc tattcagatc 240  
 gtgataataa aaacaactgg tgacattata ctatcacagc cacttgcaga catcggcggt 300  
 aagggcctgt ccacaatcga tatagacgag gcactcatta acggtgacat tgacatcgcc 360  
 gttcactcta tgaaagatgt acccacttac 390

<210> 207  
 <211> 256  
 <212> DNA  
 <213> Glycine max

<400> 207

cggttgctctc ctcagaattg gtaccagagg aagtccacta gctctggctc acgcatatga 60  
 gaccagagac aagctcatgg catcacatgc agagctagca caagaagggg ctattcagat 120  
 tgtaataatc aaaacaactg gtgacaaaat actatcacag ccacttgcag acattggtgg 180  
 gaagggccta ttcacaaaag aaatagatga ggcactcata aacggtgaca ttgacatcgc 240  
 tgtccactca atgaaa 256

<210> 208  
 <211> 289  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 208

ggagaccctc tgnctctgca ttggtgttcc catctttcag aatcagnact tcagctttct 60  
 ccaaattgtgg catcagggcn tccattgccg ttgagcaaca aanttcccag actaagggttg 120  
 ctctcctcag aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180  
 gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagnttgtaa 240  
 taataanaac nactggtgac aanatactat cacagccact tgcagacat 289

<210> 209  
 <211> 259  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 209

agggcttcca ttgccgttga gcaacaaact tcccagacta aggttgctct cctcagaatt 60  
 ggtaccagag gaagtccact agctctggct cncgcatatg agaccagaga caagctcatg 120  
 gcatnccatg cagagctagc agaagaaggg gctattcaga ttgtaataat aaaaacaact 180  
 ggtgacaaaa tactatcaca gccacttgca gacattggtg ggaagggcct attcacaaaa 240  
 gaatagatga ggcatcata 259

<210> 210  
 <211> 268  
 <212> DNA  
 <213> Glycine max

<400> 210

ctctctgctc tgcattggtg ttcccatatt tcagaatcac aacttcagct ttctccaaat 60

gtggcatcag ggcttccatt gccgttgagc aacaaacttc gcagactaag gttgctctcc 120

tcaaaattgg taccagagga agtccactag ctctgggtca ggcatatgag accagagaca 180

agctcatggc atcacatcca gagctagcgg aagaaggggc tattcagatt gtgataataa 240

aaacaactgg tgacaaaata ctatcaca 268

<210> 211

<211> 270

<212> DNA

<213> Glycine max

<400> 211

ggagactctc tgctctgcat tgggtgtccc atctttcaga atcacaactt cagctttctc 60

caaagtgtgg atcaggggct ccattgccgt tgagcaacaa acttcgcaga ctaagggttg 120

tctcctcaaa attggtacca gaggaagtc actagctctg gctcaggcat atgagaccag 180

agacaagctc atggcatcac atccagagct agcgggaagaa ggggctattc agattgtgat 240

aataaaaaca actggtgaca aaatactatc 270

<210> 212

<211> 295

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 212

tggagaccct ctgctctgca ttggtgttcc catctttcag aatcagaact tcagctttct 60

ccaaatgtgg catcagggct tccattgccg ttgagcaaca aacttcccag actaagggtg 120

ctctcctcag aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180

gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagattgtat 240

aataanaaca actggtgaca aaatatatca cagccattgc agacattggt gggag 295

<210> 213

<211> 267

<212> DNA

<213> Glycine max

<400> 213

ctctctgctc tgcattggtg ttcccatctt tcagaatcac aacttcagct ttctccaaat 60  
gtggcatcag ggcttccatt gccgttgagc aacaaacttc gcagactaag gttgctctcc 120  
tcaaaattgg taccagagga agtccatagc tctggctcag gcatatgaga ccagagacaa 180  
gctcatggca tcacatccag agctagcgga agaaggggct attcagattg tgataataaa 240  
aacaactggt gacaaatact atcacag 267

<210> 214

<211> 251

<212> DNA

<213> Glycine max

<400> 214

tggagactct ctgctctgca ttggtgttcc catctttcag aatcacaact tcagctttct 60  
ccaaatgtgg catcagggtt tccattgccg ttgagcaaca aacttcgcag actaagggtg 120  
ctctcctcaa aattgggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180  
gagacaagct catggcatca catccagagc tagcggaaga aggggctatt cagattgtga 240  
taataaaaac a 251

<210> 215

<211> 159

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 215

ccacttcagc tttctccaaa tgtggcatca gggcttccat tgccgttgag caacaaactt 60  
cccagactaa gggtgctctc ctcagaattg gtaccagagg aagtccacta gctctggctc 120  
aggcatatgn gaccagagac aagntcatgg catcacang 159

<210> 216

<211> 270

<212> DNA

<213> Glycine max

<400> 216

gttcccatct ttcagaatca gaacttcagc tttctccaaa tgtggcatca gggcttccat 60  
 tgccgttgag caacaaactt cccagactaa gggttgcctc ctcagaattg gtaccagagg 120  
 aaggtaccct acccttaaaa ataacacctt tagcttctta tgagcatttc ttttaaagaa 180  
 caagtctgtg aaaatattga gtcctgaatc ttttcaaaac tttgcctca ttttcaaatt 240  
 tagttttcaa tgctagtttt atgacagaaa 270

<210> 217  
 <211> 147  
 <212> DNA  
 <213> Glycine max

<400> 217

gtgaaatgga gaccctctgc tctgcattgg tgttcccatc tttcagaatc agaacttcag 60  
 ctttctccaa atgtggcatc agggcttcca ttgccgttga gcaacaaact tcccagacta 120  
 aggttgcctc cctcagaatt ggtacca 147

<210> 218  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 218

ccaagaccga caacaaactc actcttacca agtccgagga agctttcgct gctgccaagg 60  
 agcngatgcc tggaggtgtc aactccccag ttngtgcctt caaatccgtg ggtgggtcaac 120  
 caattgtgat tgattcagtc aaaggggtctc gtatgtggga catcgacggc aatgagtaca 180  
 ttgactacgt cggttcttgg ggtcccgcaa tcattgggtca cgctgatgat caagtgcctt 240  
 cagctctggg tgt 253

<210> 219  
 <211> 264  
 <212> DNA  
 <213> Glycine max

<400> 219

tgcgtgcgtg agcgtcttac ctttccatta tcaaaatgac tgtttcagct atcacaggct 60

cgcagtctca cctcttgcca tggtttagcga tacctctttc ctctcccacg cgtctctgaa 120  
 tcgtcgcaat ggccgatatcc gtcgtcccca agaccgacaa caaactcact cttaccaagt 180  
 ccgaagcagc tttcgtctgt gccaaaggagc tgctgcctgg cgggtgtcaac tccccagttc 240  
 gtaccttcaa atccgtaggt ggtc 264

<210> 220  
 <211> 157  
 <212> DNA  
 <213> Glycine max

<400> 220

ctcgtctgag ggctgttacc atggccatgc tgatcctttt cgtgttaagg caggtagtgg 60  
 agttgccacc ttgggacttc ctgattctcc cgggtgtcccc aaagctgaca ctgtggaaac 120  
 ccttacagcg ccctacaatg atactgccgc cgtcgag 157

<210> 221  
 <211> 266  
 <212> DNA  
 <213> Glycine max

<400> 221

aaacccgatt ttcataatct cttgcgcaag atcaccaagg agaacaatac ccttcttgtg 60  
 tttgatgaag ttatgactgg gtttcgtttg tcatacggag gtgctcaaga gtatcttggc 120  
 ataactcctg atatacaact ctaggaaaga tcattggtgg aggtctgccg gtgggggctt 180  
 atggaggggag gagggatatt atggagaagg tggcaccagc tggcccaatg tatcaggctg 240  
 ggaccttgag tgggaacctt tggcca 266

<210> 222  
 <211> 250  
 <212> DNA  
 <213> Glycine max

<400> 222

aaaggagaaa ttgccgcagt tttcctcgaa cctgttggtg gaaacgctgg tttcattggt 60  
 cctaagcctg attttcatag tttcttgccg aagatcacca aggagaacaa tacccttctt 120  
 gtgtttgatg aagtcatgac tggatttcgt ttgtcatatg gaggtgctca agagtattat 180

ggcataactc cagatataac aactctagga aagatcattg gtggaggtct gccggtaggg 240  
 cttatggagg 250

<210> 223  
 <211> 256  
 <212> DNA  
 <213> Glycine max

<400> 223

gctcaagagt attttggcat aactcctgat ataacaactc taggaaagat cattggtgga 60  
 ggtctgccgg tgggggctta tggagggagg agggatatta tggagaaggt ggcaccagct 120  
 ggcccaatgt atcaggcttg gaccttgagt gggaaccctt tggccatgac tgcaggaata 180  
 cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa aatcaccggt 240  
 gagcttgttc agggca 256

<210> 224  
 <211> 288  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 224

tttaggnagc tgatgcctgg anggcgtgaa ctccccagtt cgtgncttca aatccgtggg 60  
 tgggtcaacca attgtgattg attcagtcaa agggctctcg atgtgggata tcgatggcaa 120  
 tgagtacatt gactacgttg gttcctgggg tcttgcatac attggtcacg ctgatgatca 180  
 ggtgcttgca gctctgggtg aaaccatgaa ganaggaacc agctttgggt gcaccctgtc 240  
 tgctggaaaa cacttttggc agagctgggt tatcgatgcc gtncccca 288

<210> 225  
 <211> 283  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 225

attttgcaga tgccaaaaag agtgatacgg ccaagtttgc taggcccttt tggggaatgc 60  
 tggcggaagg tgtctatttg gcaccttccc agnttgangc nggcttcacc agcttggcac 120

atacttctgn tgacataaaa aagacgatan ccgctgntga gaagggttttc anggagntct 180  
gatgggttaaa ttttgnnttg ttgcaaattt aattntcgga ggggtgaattt ttaggtcaat 240  
ttngattatt gttatggcag ttgctttcgn tatgatctgt atc 283

<210> 226  
<211> 249  
<212> DNA  
<213> Glycine max

<400> 226

gggtcctgca atcattgggc acgctgatga tcagggtgctt gcagctctgg gtgaaaccat 60  
gaagaaagga accagctttg gtgcaccctg tctgctggaa aacactttgg cagagctggg 120  
tatcgatgcc gtccccagca ttgaaatggg tcggtttgct aattcaggca ctgaagcttg 180  
catgggtgcg ctccgtctgg cccgtgctta taccggaaga gagaagatca tcaagtttga 240  
gggctgtta 249

<210> 227  
<211> 442  
<212> DNA  
<213> Glycine max

<400> 227

ataaggcttt gcatttcatt tgagagagag agcgtcttac ctttccatta tcaaaatggg 60  
tgggtcggtc atcacaggag cgaggctaac cctagggata gggttggcga tacctctttc 120  
ctctcccacg cgctctcgaa ccgtcgcaat ggccgtatcc gtcgacccca agaccgacaa 180  
caaactcact cttaccaagt ccgaggaagc tttcgctgct gccaaaggtag gcatgacctc 240  
cctcttcctt ccttccttcc tcctttcaat tttgattttt gatttttgat ttcaggagct 300  
gatgcctgga ggtgtcaact ccccagttcg tgccttcaaa tccgtgggtg gtcaaccaat 360  
tgtgattgat tcagtcaaag ggtctcgat gtgggacatc gacggcaatg agtacattga 420  
ctacgtcggg tcttgggggc cc 442

<210> 228  
<211> 275  
<212> DNA  
<213> Glycine max



<223> unsure at all n locations  
 <400> 228

tcaaaatggc tgtttcggct atcacaggag cgaggctaac cctagggata gggttggcga 60  
 tacctctttc ctctcccacg cgctctcgaa cntcgcaat ggccgtatcc gtcgacccca 120  
 agaccgacaa caaactcact cttaccaagt ccgaggaagc tttcgctgct gccaaaggagc 180  
 tgatgcctgg aggtgtcaac tccccagttc gtgccttcaa atccgtgggt ggtcaaccaa 240  
 ttgtgattga ttcagtcaaa gggctctgta tgtgg 275

<210> 229  
 <211> 261  
 <212> DNA  
 <213> Glycine max

<400> 229  
 acccacgcgt ccgacggctg caagaggacg acagaagggg aaggctttgc atttcatttg 60  
 agagagagag cgtcttacct ttccattatc aaaatggctg tttccgctat cacaggagcc 120  
 aagctaacc taaggataag gttggcgata cctccttccct ctcccaagcg ctctcgaacc 180  
 gtcgcaatgg ccgtatccgt cgaccccaag accgacaaca aactcaatcc taccaagtcc 240  
 gaagaagctt tcgctgctgc c 261

<210> 230  
 <211> 289  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 230

ggagaggata aggctttgca tttcatttga gaganagagc gtcttacctt tccattatca 60  
 aaatggctgt ttcggctatc acaggagcga ggctaaccct agggataggg ttggcgatac 120  
 ctctttcctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180  
 ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240  
 tgccctggagg tgtcaactcc ccagttcgtg ccttcaaate cgtgggtgg 289

<210> 231  
 <211> 252  
 <212> DNA

<213> Glycine max

<400> 231

agcgtcttac ctttccatta tcaaaatggc tgtttcggct atcacaggag cgaggctaac 60  
cctagggata gggttggcga tacctctttc ctctcccacg cgctctcgaa ccgctcgcaat 120  
ggccgtatcc gtcgacccca agaccgacaa caaactcact cttaccaagt ccgaggaagc 180  
tttcgctgct gccaaaggagc tgatgcctgg aggtgtcaac tccccagttc gtgccttcaa 240  
atccgtgggt gg 252

<210> 232

<211> 281

<212> DNA

<213> Glycine max

<400> 232

ggctttgcat ttcatttgag agagagagcg tcttaccttt ccattatcaa aatggctggt 60  
tcggctatca caggagcgag gctaacccta gggatagggt tggcgatacc tctttcctct 120  
cccacgcgct ctcgaaaccgt cgcaatggcc gtatccgtcg accccaagac cgacaacaaa 180  
ctcactctta ccaagtccga ggaagctttc gctgctgcc aaggagctgat gcctggaggt 240  
gtcaactccc cagttcgtgc cttcaaatec gtgggtgggc a 281

<210> 233

<211> 276

<212> DNA

<213> Glycine max

<400> 233

taaggctttg catttcattt gagagagaga gcgtcttacc tttccattat caaaatggct 60  
gtttcggcta tcacaggagc gaggctaacc ctagggatag ggttggcgat acctctttcc 120  
tctcccacgc gctctcgaa cgtcgcaatg gccgtatccg tcgaccccaa gaccgacaac 180  
aaactcactc ttaccaagtc cgaggaagct ttcgctgctg ccaaggagct gatgcctgga 240  
gggtgtcaact ccccagttcg tgccttcaaa tccgtg 276

<210> 234

<211> 276

<212> DNA

<213> Glycine max

<400> 234

ttgcatttca tttgagagag agagcgtctt acctttccat tatcaaaatg gctgtttcgg 60  
ctatcacagg agcgaggcta accctagggg taggggttggc gatacctctt tcctctccca 120  
cgcgctctcg aaccgctgca atggccgtat ccgctcgacc caagaccgac aacaaactca 180  
ctctttacca gtccgaggaa gctttcgtg ctgccaagga gctgatgcct ggaggccgtc 240  
aatccccagt tcgtgccttc aaatccgtgg gtggtc 276

<210> 235

<211> 251

<212> DNA

<213> Glycine max

<400> 235

tttgcatttc atttgagaga gagagcgtct tacctttcca ttatcaaaat ggctgtttcg 60  
gctatcacag gagcgaggct aaccctaggg atagggttgg cgatacctct ttcctctccc 120  
acgcgctctc gaaccgctgc aatggccgta tccgctcgacc ccaagaccga caacaaactc 180  
actcttacca agtccgagga agctttcgtc gctgcaagga gctgatgcct ggagggtgtca 240  
actccccagt t 251

<210> 236

<211> 271

<212> DNA

<213> Glycine max

<400> 236

cggctcgaca aggctttgca tttcatttga gagagagagc gtcttacctt tccattatca 60  
aaatggctgt ttcggctatc acaggagcga ggctaaccct agggataggg ttggcgatac 120  
ctcttttctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180  
ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240  
tgccctggagg tgtcaactcc ccagttcgtg c 271

<210> 237

<211> 257

<212> DNA

<213> Glycine max

<400> 237

ggagaggata aggctttgca ttccatttga gagagagagc gtcttaactt tacattatca 60  
aaatggctgt ttcggctatc acaggagcga ggctaaatct agggataggg ttggcgatac 120  
ctcttttctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180  
ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240  
tgcttgaggg tgtcaac 257

<210> 238

<211> 153

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 238

acaggagcga ggctaaccct agggataggg ttggcgatan ctcttttctc tcnactccg 60  
ctctcgaacc ntcgcaatgg ccgtatccgt cgaccccaag acngacaaca aactcactct 120  
taccaagtcc gaggaagctt tcgctgctgc caa 153

<210> 239

<211> 104

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 239

acggctgcga gaagacgaca gaagggggag cgtcttacct ttccattatc aaaatggcta 60  
tttcggctat cacaggagcg aggctaanc tagggatagg gttg 104

<210> 240

<211> 268

<212> DNA

<213> Glycine max

<400> 240

ggctgggacc ttgagtggga accctttggc catgactgca ggaatacaga ccctgcagcg 60  
tattaaggag ccaggaactt atgagtactt ggacaaaatc accggtgagc ttgttcaggg 120

cattattgaa gctgggaaga gggcaggcca tgcaatatgt ggtggtcata taagggggat 180  
 gtttgggttt ttcttcacag aaggaccagt gtataatttt gcagatgcca aaaagagtga 240  
 tacggacaag tttctaggtt cttttggg 268

<210> 241  
 <211> 256  
 <212> DNA  
 <213> Glycine max

<400> 241  
 gaaggtggca ccagctggcc caatgtatca ggctgggacc ttgagtggga accctttggc 60  
 catgactgca ggaatacaga ccctgcagcg tattaaggag ccaggaactt atgagtactt 120  
 ggacaaaatc accggtgagc ttgttcaggg cattattgaa gctgggaaga gggcaggcca 180  
 tgcaatatgt ggtggtcata taagggggat gtttgggttt ttcttcacag aaggaccagt 240  
 gtataatttt gcagat 256

<210> 242  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<400> 242  
 ggcaccagct ggcccaatgt atcaggctgg gaccttgagt gggaaccctt tggccatgac 60  
 tgcaggaata cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa 120  
 aatcacccgt gagcttggtc agggcattat tgaagctggg aagagggcag gccatgcaat 180  
 atgtggtggt catataaggg ggatgtttgg gtttttcttc acagaaggac cagtgtataa 240  
 ttttgcagat gcc 253

<210> 243  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<400> 243  
 ctcgagccgc tcgagccggt ctgctggaaa acactttggc agagctgggt atcaatgcgg 60  
 tccccagcat tgcaatgggt cgctttgtca attcaggcac cgaagcttgc atgggtgcac 120

tacgtctcgc ccgagcttat accggaagag agaagatcat caagtttgag ggctgttacc 180  
atggccatgc tgatcctttt cttgttaagg caggtagtgg agttgccacc ttgggacttc 240  
ctgattctcc cgggtgtccc aaagctgcc 269

<210> 244  
<211> 266  
<212> DNA  
<213> Glycine max

<400> 244

ctcgagccgc tcgagccggt ctgctgaaa acactttggc agagctgggt atcaatgcgg 60  
taccagcat taccaatggt tcgctttgtc aattcaggca ccgaagcttg catgggtgca 120  
ctacgtctcg cccgagctta taccggaaga gagaagatca tcaagtttga gggctgttac 180  
catggccatg ctgatccttt tcttgtaag gcaggtagtg gagttgccac cttgggactt 240  
cctgattctc cgggtgtccc caaagc 266

<210> 245  
<211> 266  
<212> DNA  
<213> Glycine max

<400> 245

tcaagtttga gggctgttac cgtggccatg ctgatccttt tcttgtaag gcaggtagtg 60  
gagttgccac cttaggactt cctgattctc cgggtgtccc caaagctgcc acttttgaaa 120  
cccttacagc cccctacaat gacaccgagg ccattgagaa actcttcgag gccaacaaag 180  
gagaaattgc cgcagttttc ctggaacctg ttgttgaaa cgctggtttc attgttccta 240  
agcctgattt tcatagtttc ttgcgc. 266

<210> 246  
<211> 238  
<212> DNA  
<213> Glycine max

<400> 246

gttaccatgg ccattgctgat ccttttcttg ttaaggcagg tagtggagtt gccaccttgg 60  
gacttctga ttctcccggt gtcccaaaag ctgccacttt tgaaaccctt acagccccct 120

acaatgacac tgccgcccgtt gagaagctct ttgaggctaa caaaggagaa atcgctgctg 180  
 ttttctcga acctgttggt ggaaacgctg gtttcattgt tcctaaaccg attttcat 238

<210> 247  
 <211> 232  
 <212> DNA  
 <213> Glycine max  
 <400> 247

gggagatctg attgttaaatt ttgttttgt tgccaattta gttttcagtt ggtgaatttt 60  
 gtaggtcaat ttagattatt atggcagttg ctttcgttat gatctgtatc attttcccat 120  
 cctgtatcta cccagtgtat tatgttgagc tgtaagttac ttgaatgtga agcatgtgaag 180  
 cattcgaatt cattgtttta ctctaatc tagttccaca tgttatgttt tt 232

<210> 248  
 <211> 82  
 <212> DNA  
 <213> Glycine max  
 <400> 248

ccatcctgta tctaccaggt gtattatgtt gagctgtaag ttacttgaat gtgaagcatg 60  
 taagcattcg aattcattgt tt 82

<210> 249  
 <211> 406  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 249

acgcccacgc gtccgtacgg ctgcgagaag acgacagaag ggggtggttg atgaggcgaa 60  
 actcgagagt gtaaggtttt gcatttcatt tgacgaagag tgagagagtc ttatctgtcg 120  
 tctctgatct ctgatcgcat cttcattccg aaaatggctg tttcggctat cactggagcg 180  
 aggctaactc tagggatgtc tctttcctct tccacgcgat cacgaaccgt cgcaatggcc 240  
 gtatctatcg accccaagac cgataacana ctcaactotta ccaagtccga ggaagcttcc 300  
 gctgcgggcca aagagctgat gcctggaggc gtgaactccc cagttcgtgc cttcanatcc 360  
 gtgggtgggc anacaattgt gattgattca gtcaaagggt ctcgta 406

<210> 250  
 <211> 305  
 <212> DNA  
 <213> Glycine max

<400> 250

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cccacgcgtc cgtacggctg cgagaagacg acagaagggg gagagtgtaa ggttttgcat   60
ttcatttgac gaagagttag agagtcttat ctgtcgtctc tgatctctga tcgcatcttc   120
attccgaaaa tggctgtttc ggctatcact ggagcgaggc taactctagg gatgtctctt   180
tcctcttcca cgcgatcacg aaccgtcgca atggccgtat ctatcgaccc caagaccgat   240
aacaaactca ctcttaccac gtccgaggaa gctttcgctg cggccaagga gctgatgcct   300
ggaggg                                           305

```

<210> 251  
 <211> 296  
 <212> DNA  
 <213> Glycine max

<400> 251

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gaaactcgag agtgtaaggt tttgcatttc atttgacgaa gagttagaga gtcttatctg   60
tcgtctctga tctctgatcg catcttcatt ccgaaaatgg ctgtttcggc tatcactgga   120
gcgaggctaa ctctagggat gtctctttcc tcttcacgc gatcaacaac acaagcaatg   180
gccgtatcta tcgaccccaa gaccgataac aaactcactc ttaccaagtc cgaggaagct   240
ttcgtcgcgg ccaaggagct gatgcctgga ggcgtgaact cccagttcg tgcctt       296

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<210> 252  
 <211> 266  
 <212> DNA  
 <213> Glycine max

<400> 252

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ctgcgagaag acgacagaag ggggagagtg taagggtttg catttcattt gacgaagagt   60
gagagagtct tatctgtcgt ctctgatctc tgatcgcatc ttcattccga aaatggctgt   120
ttcggctatc actggagcga ggctaactct agggatgtct ctttctctct ccacgcgatc   180
acgaaccgtc gcaatggccg tatctatcga cccaagacc gataacaaac tcactcttac   240

```



caagtccgag gaagctttcg ctgcgg

266

<210> 253

<211> 293

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 253

ggttttgcat ttcatttgac gaagagtgag agagtcttat ctgtcgtctc tgatctctga 60

tcgcatcttc attccgaaaa tgggtgtttcg gctatcactg gagegaggta actctaggga 120

tgtctctttc ctcttccacg cgatcacgaa ctgaagcaat ggccgtatct atcgacccca 180

agaccgataa caaacncatc ttaccaagtt cgaggaagtt tcgctgcggc caaggagtga 240

tgctggaggc gtgaactccc cagttcgtgc cttcaaatcc gtgggtgggc aac 293

<210> 254

<211> 273

<212> DNA

<213> Glycine max

<400> 254

gttggagagg cgaaactcga gagtgtgaagg ttttgcattt catttgacga agagtgagag 60

agtcttatct gtcgtctctg atctctgacg gcattctcat tccgaaaatg gctgtttcgg 120

ctatcactgg agcgaggcta actctaggga tgtctctttc ctcttccacg cgatcacgaa 180

tccccgcaat ggccgtatct atcgacccca agaccgataa caaactcact cttaccaagt 240

ccgaggaagc tttcgtgctg gccaaaggagc tga 273

<210> 255

<211> 267

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 255

gggcgaaact cgagagtgtg aggttttgca tttcatttga cgaagagtga gagagtctta 60

tctgtcncct ctgatctctg atcgatctctn cattccgaan atggctgttt cggctatcac 120

tggnncgagg ctaactctan ggatgtcncn ntncctcttcc angngatcac gcnntnnncg 180

naanggacgn anctatcgac cccaagacng ataacaaatn actctnacca ngtcgngga 240

agctttcgct gcggccaagg agtnat 267

<210> 256

<211> 254

<212> DNA

<213> Glycine max

<400> 256

ggcgaaactc gagagtgtaa ggttttgcatt ttcatttgac gaagagttag agagtcttat 60

ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggctgtttc ggctatcact 120

ggagcgaggc taactctagg gatgtctctt tctctttcca cgcgatcacg aacctatgca 180

atggccgtat ctatcgaccc caagaccgat acaaaactca ctcttaccaa gtccgaggaa 240

gctttcgctg cggc 254

<210> 257

<211> 254

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 257

gttggatgag gcgaaactcg agagtgtgag gttttgcatt tcatttgacg aagagtgaga 60

gagtcttata tgctgtctct gatctctgat cgcattctca ttccgaaaat ggctgattcg 120

gctatcactg gagcgccgtt aactctaggg atgtcttctt cctcgtgcag gcgacctcga 180

acgctggnaa tggccgtatc tatcgacccc aagaccgata acaaactcac tcttaccaag 240

tccgaggaag cttt 254

<210> 258

<211> 270

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 258

aggttttgca tttcatttga cgaagagtga gagagtctta tctgtcgnnt ctgatntntg 60

atcgcatctt cattccgaaa atggcngttt cggctatcac tggagcgagg ctaagtntag 120

ggatgtctct ttacctnttc cacgcgatca cgaaccacac gcaatggccg tatctatcga 180  
 ccnaagacc gctaacaaan tcantctnac caagttccga ggaagntttg gnngcggggcc 240  
 aagggagtga tgcttgagg cgtgaactcc 270

<210> 259  
 <211> 165  
 <212> DNA  
 <213> Glycine max

<400> 259

ggcgaaactc gagagtgtaa ggttttgcatt ttcatttgac gaagagtgag agagtcttat 60  
 ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggctgtttc ggctatcact 120  
 ggagcgaggc taactctagg gatgtctctt tctctttcca caca 165

<210> 260  
 <211> 161  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 260

cgaaactcga gagtgtgaagg ttttgcattt catttgacga agagtgagan agtcttatct 60  
 gtcgtctctg atctctgatc gcattctcat tcccgaaaat ggctgtttcg gctatcactg 120  
 gagcgaggct aactctaggg atgtctcttt cctctttcac a 161

<210> 261  
 <211> 153  
 <212> DNA  
 <213> Glycine max

<400> 261

aaggttttgc atttcatttg acgaagagtg agagagtctt atctgtcgtc tctgatctct 60  
 gatcgcatct tcattccgaa aatggctgtt tcggctatca ctggagcgag gctaactcta 120  
 gggatgtctc tttcctcttc cacacaacat acg 153

<210> 262  
 <211> 241  
 <212> DNA

<213> Glycine max

<400> 262

cttcatttga cgaagagtga gagagtctta tctgtcgtct ctgatctctg atcgcatctt 60  
cattccgaaa atggctgttt cggctatcag tggagcgagg ctaactctag ggatgtctct 120  
ttcctgttcc acgcgatgta taagatgatg gatggccgca tctatcgacc tctagacagc 180  
taagatactc agtcttagga ggtccgagga agctttcgtc gtggccaagg attgatgtcc 240  
a 241

<210> 263

<211> 130

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 263

gcgaaactcg agagtgttaag gttttgcatn tcatttgacg aagagtgaga gagtcttctc 60  
tgtcgnntct gatctctgat cgcattcttca ttccgaaaat ggctgttttcg gctatcactg 120  
gagcgaggct 130

<210> 264

<211> 169

<212> DNA

<213> Glycine max

<400> 264

cgctcgagcg aatcggctca cggctcgagg ttttgcatth actttgacga agagtgcga 60  
gagtcttctc tgtcgtctct gatctctgat cgcattcttca ttccgaaaat ggctgttttcg 120  
gctatcactg gagcgaggct aactctaggg atgtctcttt cctcttcca 169

<210> 265

<211> 181

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 265

gcgaaactcg anagtgttaag gnttngcatt ncanttgacg aagagtgaga gagtctnctc 60

tgctcngctc tgatntnnga tgcacntc attccganaa tggctgtttc ggctatcact 120  
ggagcgaggc taactctagg gangtctctn nctcttcca cacaacatac gagnntctc 180  
g 181

<210> 266  
<211> 342  
<212> DNA  
<213> Glycine max  
<223> unsure at all n locations  
<400> 266

anacactgnt aaagtgaaga nggtgaatgg agatgtgtct gagaacaaca aaggaggnag 60  
caaaccttca gcagaaatag atcttccaga tgctgaagtt ggaaaagttc gcttgcgatt 120  
tgcacctgaa ccaagtgggtt atcttcatat tggacactca aaagcagctt tgttgaacaa 180  
tattttgctg agcgatacca gggtcagggtt attgtncgnt ctgatgatan caatcctgct 240  
aaagagagca atgaatttgt ggacaacctg attaaagata ttgatacatt gggcatcana 300  
tatgaacaaa ttacatatac atcagattac ttccctgagt tg 342

<210> 267  
<211> 290  
<212> DNA  
<213> Glycine max  
<400> 267

agctgccgga gataaagcta caacatatac taaaaggata tggcttgacc ttgctgatgc 60  
agtgtcttta tcagcaggtg aggaagtaac attgatggat tggggaaatg ccatagtga 120  
ggaaatagag aaggaccaag atggaaatat catagggttg agtgggtgttt tgcatctaga 180  
aggatctgtg aagaccacaa aattgaaact cacttggcta cctgagatag atgaactagt 240  
tagcctgaca ttagtggagt ttgattatct aattacaaag aaaaagcttg 290

<210> 268  
<211> 248  
<212> DNA  
<213> Glycine max  
<400> 268

tcggaattca gcgcgagggg tagcaatcct gctaaagtaa gcaatgaatt tgtggacaac 60

cttatttaaag atggtgatac attgggtatc aaatatgaac aaatgacata tacgtcagag 120  
tacttccctg agttgatgga gatggctgaa aaattaattc gccagggtaa agcatatggt 180  
gatgacacac cacgtgaaca aatgcaaaaa gagagattgg atggcataga ttctaaatgc 240  
agaaataa 248

<210> 269  
<211> 258  
<212> DNA  
<213> Glycine max

<400> 269

ggcattgttg tgtggcggca cgccatggtc gaaggttact atttcaccat tttccaccac 60  
tcccacaccc ctgcacactt cttcttccaa cgacgccgtt tctcagtctc tgctgctttc 120  
tccgaacaac aaccaccgcc acccgttcgc gttcggttcg ctcttctcc caccggaac 180  
ctccacgtcg gcggtgcccg aacggccctc ttcaactact tgttcgcaag gtccaaaggt 240  
gggaaatttg tgctgaga 258

<210> 270  
<211> 267  
<212> DNA  
<213> Glycine max

<400> 270

actgagtaga tggagatgga tgaaaaatta gttcgccagg gaaaagcata tgttgatgac 60  
atagcacgtg aacaaatgca aaaagagaga atggatggca tagattctaa atgcagaaat 120  
aatagtgtag aggagaatct aaaattgtgg aaggaaatgt tggcaggaac agagaggggg 180  
ttgcagtgtt gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat 240  
cctgtttatt atcgttgcaa tccaatg 267

<210> 271  
<211> 245  
<212> DNA  
<213> Glycine max

<400> 271

tgatgcacga tttctacag tgcaaggaat tgtgcgtaga ggtttgaaaa ttgaagccct 60

gatacagttt attgttgagc agggggcgctc caaaaatctc aatctcatgg aatgggacaa 120  
gctctggacc attaataaga agattattga ccctgtctgt cctagacaca ctgctgtcat 180  
tgcagacaga cgtgttttgt tgactctcac tgatggctct gagtatcctt ttgtccgcat 240  
catac 245

<210> 272  
<211> 280  
<212> DNA  
<213> Glycine max

<400> 272

attgcaggaa cagagagggg cttgcagtgt tgtgtccgtg gcaagttgga tatgcaggac 60  
ccaaacaaat cacttagaga tcctgtttat tatcgttgca atccaatgcc ccatcataga 120  
attggatcca agtataaagt gtatccaact tatgattttg cttgtccata tgttgattct 180  
atagaaggaa tcacgcatgc ctttcgatct agtgaatacc atgatcgcaa tgcccagtat 240  
tactggattc aagaggacat gggctctaga aaagttctta 280

<210> 273  
<211> 276  
<212> DNA  
<213> Glycine max

<400> 273

aggttgagtg gtgttttgca tcttgaagga tctgtgaaga ccacaaaatt gaaactcact 60  
tggctacctg agatagatga actagttagc ctgacattag tggagtttga ttatctaatt 120  
acaaagaaaa agcttgaaga agggaggatt tcattgatgt ggttaacca tgtaccaaaa 180  
aggagacttt agcttatgga gactccaaca tgcgaaatct tcagcgtgga gatttattgc 240  
aactggagag aaagggatat ttcagggtgtg atttac 276

<210> 274  
<211> 283  
<212> DNA  
<213> Glycine max

<400> 274

agcaggtatt cgtgctgagt cagattctag agataattat tctcctggat ggaagtattc 60

caactgggaa atgaaagggg ttcttctaag aattgaaatt gggccaaagg atttagcaaa 120  
taagcaggtc atcaactttg ccagtgtttt atcaattctc atatttgtca ttttgcttcc 180  
acactgttag tttttcagtg aacaccaaat aaatctcttt gaattttgca taggttcgca 240  
ctgttcgacg tgataatggg gcaaagatag acattgctag tgc 283

<210> 275  
<211> 403  
<212> DNA  
<213> Glycine max  
<400> 275

caaaaccatt tgcgttgctg cagtcgcagt caaaggccaa ggcaaaaccc taaattgtct 60  
cacactttcg tcggaatccg cttttggctt tttccgtgac aagatgccgg cgaaggacga 120  
cggctccgac aaggagaagt gccttgatct cttttctgaaa atcgggcttag acgagcgcac 180  
cgctaaaaac accgtcgcaa acaacaaagt caccgccaat cttactgcag tcatctacga 240  
ggccggtgtt attgatggat gcagccgagc gggttgaaat cttctttaca cggttgcaac 300  
gaagtaccct gcaaatgcct tgccacatcg cccaacattg ctacagtaca ttgtctcggt 360  
aaggtgaaaa caactgcaca gttagatgca gcattatcat ttc 403

<210> 276  
<211> 445  
<212> DNA  
<213> Glycine max  
<223> unsure at all n locations  
<400> 276

gagaaaatgg cgctgctgtg angcggttgc catggnacga aggtnaatag tgnctctaca 60  
tgtnnaatc aatcntaaca ccccnaggna cntnnttatt cnaangacgc aagtttctna 120  
atctctgatg tctttagaac aacgnaacat ccgctcgnag tcgttttgct ncttctacaa 180  
cggaaacctt acatatcggc atgttccacg aacggggcct ctnaactac ttgttcgnaa 240  
ggtccaaang tggaaaattt gtgctgaata attgaggaca ctgacttgga naggtccagt 300  
agggagttat gaggaggcca atgctcaaag atctttcttg gcttggactt gattgggatn 360  
aaggncctgg tgttgaacgg gattatggcc ttatangcag tctgagagga attcttatcc 420



aaccaatntc nggaaaacct acanc

445

<210> 277

<211> 277

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 277

gtttattatc gttgcaatcc aatgcncat catagaattg gatccaagta taaagtgtat 60

ccaacttatg attttgcttg tccatatgtt gattctatag aaggaatcac gcatgccctt 120

cgatctagtg aancccatga ttgcaatgcc cagtattact ggattcaaga ggacatgggt 180

cttagaaaag ttcttatcta cgaatttagc cggtnccaat atgggtctaca ctcttctgag 240

caaacgaaag cttttgtggt ttgtacaaaa tgggaaa 277

<210> 278

<211> 255

<212> DNA

<213> Glycine max

<400> 278

agattctaga gataattatt ctcttggatg gaagtattct aattgggaaa tgaaaggtgt 60

tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcaggttc gtgctgttcg 120

acgtgataat ggagcaaaga tagcattgct agtgctgatt tggttgtgga aataaaaaag 180

ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240

attcagatca tacac 255

<210> 279

<211> 258

<212> DNA

<213> Glycine max

<400> 279

agattctaga gataattatt ctcttggatg gaagtattct aattgggaaa tgaaaggtgt 60

tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcaggttc gtgctgttcg 120

acgtgataat ggagcaaaga tagacatgct agtgctgatt tggttgtgga aataaaaaag 180

ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240

attcagatca tacacact 258

<210> 280  
 <211> 265  
 <212> DNA  
 <213> Glycine max

<400> 280

agattctaga gataattatt ctcttggatg gaagtattct aattgggaaa tgaaaggtgt 60  
 tctcttaaga attgaaattg ggccaaagga tttagcaaatt aagcagggttc gtgctgttcg 120  
 acgtgataat ggagcaaaga tagacattgc agtgctgatt tggttgtgga aataaaaaag 180  
 ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240  
 attcagatca tacacacttg ggatg 265

<210> 281  
 <211> 264  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 281

tcttgctaaa gaaagcaatg aatttgtgga caaccttatt aaagatattg atacattggg 60  
 tatcaaatat gaacaaatta catatacgtc agattacttc cctgagttga tggagatggc 120  
 tgaaaaatta attcgccagg gtaaagcata tgttgatgac acaccacgtg aacaaatgcn 180  
 aaaagagaga atggatggca tagattctaa atgcagaaat aatagtgtag aggagaatct 240  
 aaaattgtgg aaggnaatga ttgc 264

<210> 282  
 <211> 263  
 <212> DNA  
 <213> Glycine max

<400> 282

cctgattaaa gatattgata cattgggcat caaatatgaa caaattacat atacatcaga 60  
 ttacttccct gagttgatgg aaatggctga aaaattaatt cgcgagggtg aaacatatgt 120  
 tgatgacact ccacgtgaac aaatgcaaaa agagagaatg gatggcatag aatctaaatg 180

cagaaataat atagtagagg agaatctaaa actgtggaag gaaatgattg caggaacaga 240  
gaggggattg cagtgttggtg tcc 263

<210> 283  
<211> 267  
<212> DNA  
<213> Glycine max

<400> 283

ttgggcatca aatatgaaca aattacatat acatcagatt acttccctga gttgatggaa 60  
atggctgaaa aattaattcg cgagggtaaa acatatgttg atgacactcc acgtgaacaa 120  
atgcaacaag agagaatgga tggcatagaa tctaaatgca gaaataatat agtagaggag 180  
aatctaaaac tgtggaagga aatgattgca ggaacagaga ggggattgca gtgttggtgc 240  
cgtggcaagt tggatatgca ggaccca 267

<210> 284  
<211> 269  
<212> DNA  
<213> Glycine max

<400> 284

atgggagttc agcaaaccga ctccattcat caggagtcgc gagtttcttt ggcaagaagg 60  
gcacactgct tttgcaacaa aggatgaagc agatgcagag gttcttgaga ttctggaatt 120  
atatagggct atatacgaag agatttggca gttcctgtca taaagggtaa gaaaagttag 180  
cttgagaagt ttgctggtgg actctacact accagtgttg aggcatttat tccaaacact 240  
ggtcgtggta tccaagggtc aacttctca 269

<210> 285  
<211> 422  
<212> DNA  
<213> Glycine max

<400> 285

gtccaaacgg cagcgagaag acgacagaag gggtcagatg ggagttcagc aacccactc 60  
cattcatcag gagtcgtgag tttctttggc aagaagggca cactgctttt gcttcaaagg 120  
aggaagcaga tgcagaggtt cttgagattc tggaattata taggcgtata tacgaagagt 180

atttggcagt tcctgtcata aagggtaaga aaagtgagct tgagaagttt gctggtggac 240  
 tctacactac tagtggtgag gcatttatcc caaacactgg tcgtggtata caaggtgcaa 300  
 cttctcattg tttgggccaa aattttgcta aaatggttga gataaacttt gaaaatgaaa 360  
 agggagagag agcaatggtc tggcagaatt catgggccta tagtactcga actatcgggtg 420  
 tc 422

<210> 286  
 <211> 240  
 <212> DNA  
 <213> Glycine max

<400> 286

aaattatata ggcgtatata cgaagagtat ttggcagttc ctgtcataaa gggtaagaaa 60  
 agtgagcttg agaagtttgc tgggtggactc tacactacca gtgttgaggc atttattcca 120  
 aacactgggtg tggatatcaa ggtgcaactt ctcatgtttt gggccaaaat tttgctaaaa 180  
 tgtttgagat aaactttgaa aatgaaaagg gagagaaagc aatgggtctgg cagaattcat 240

<210> 287  
 <211> 378  
 <212> DNA  
 <213> Glycine max

<400> 287

ggaggctaca atttttgagc tacgttatcg aacaaatgtg ggtgagttgc ttgggcgtgt 60  
 gcgcaaagag ctgccatggg gtgatgcaaa agttgccaa caacttggtg atgcgcaact 120  
 atatgaacta cttggtgata ggacagcagc agatgatgaa aagccttcta gaaagaagaa 180  
 ggagaaacct gctaaagtag aggataaggc agctcctgtt tctacccttg aaaagtcacc 240  
 tgaagaagac gttaatccat ttttaatat ccctaatacca gaggaaaatt tcaaggtgca 300  
 tactgaagtg ccttttagtg atggtagtat tttgagatgt tgcaatacaa gagatctgct 360  
 tgacaaacac ttaaaagc 378

<210> 288  
 <211> 269  
 <212> DNA  
 <213> Glycine max

<400> 288

aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60  
aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120  
gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat cctgtatatt 180  
atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240  
atgatttcgc ttgtccatat gttgatgct 269

<210> 289

<211> 258

<212> DNA

<213> Glycine max

<400> 289

aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60  
aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120  
gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat cctgtatatt 180  
atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240  
atgatttcgc ttgtccat 258

<210> 290

<211> 251

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 290

aggcgatctc gggtgggaag cggggaagat ggggaagctt gtaattaagc atttggctgc 60  
caacncggtg cagaagaatg gttgttggtta acaggactga agagaaagt aatgccattc 120  
ggaaagagtt gaaggatggt gagattgtat ttagaccatt ttcagatatg ctggcgtgtg 180  
ctgctgaagc tgatgtgatc ttcaccagca cagcgtctga atcaccatgt tctctaaaca 240  
gaatgtgcag a 251

<210> 291

<211> 240

<212> DNA

<213> Glycine max

<400> 291

atttgcata ggc tgaacat tcacactgct cccgttgaga tgcgtgagaa gcttgcaatt 60  
ccagaatccc attggggtca ggctattaag gacctttgcg ctttgaacca tatcgaagaa 120  
gccgcgggttc tcagcacgtg taaccgcatg gagatctatg ttgtggctct tccccagcac 180  
cgtgggtgtta aggaagttac tgattggatg tctaaggatga gcgggatttc aatacctgag 240

<210> 292

<211> 275

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 292

aggaagcagc tgttctgagc acctgcaaca gaatggaaat atatgttggt gctctgtcca 60  
agcaccgtgg tgttaaagaa gtcactgaat ggatgtccaa aacangtggg attccagttg 120  
cagatctttg ccagcatcag tttctgctat acaacaaaga tgccacacaa cacctttttg 180  
aagtatctgc aggtcttgat tctctagtgt tgggagaagg tcaatccttg cccaggtgan 240  
gcaggttgct aatttggaca aggnntaang ncttc 275

<210> 293

<211> 276

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 293

ggtaagaact tgagacaaaa cattgctgct ggtgcagtan ncnnnnagtt catcaactgt 60  
antncnggga cntnattnag gctaccngaa gntcacatg ncatgcaagg ntgttggtca 120  
ttggagctgg gnagatcgga agcttgatgat caagcatttn gtggcaaaaag ggtgcacaaa 180  
gatgggtggt gtcataagat gangagagag ttgccgcat cctgaagaa atcaagatgt 240  
tgagataatc tacaagccac tctcggagat gctcac 276

<210> 294

<211> 271

<212> DNA

<213> Glycine max

<400> 294

ctcgagcgga ataagctact tcatgggtccc atgcagcacc taaggtgtga tgggaacaat 60

gatagtagtc tgagtgaagt acttgagaat atgcgcgccc ttaacagaat gtatgatctt 120

gagacagaaa cttccttgat cgaagaaaag atcagagtca agatggaacg gggttcagaag 180

tagattcttc ttcaattggt ttagttttac ttgattactg tgggggctgc aatcctcgcc 240

attttgtaca ctacagtagt tgattgagggc c 271

<210> 295

<211> 130

<212> DNA

<213> Glycine max

<400> 295

ggcaatcatt gctgaagaat ctaagcaatt tgaagcttgg agggactcgc tggaaactgt 60

tcctactatt aagaaattga gggcttatgc tgaaagaatc aggcttgctg agcttgagaa 120

gtgcttaggt 130

<210> 296

<211> 426

<212> DNA

<213> Glycine max

<400> 296

cccacgcgtc cgaacatttg gtggcaaaaag gttgcaaaaa gatgggtggtt gtcaatagaa 60

ctgatgagag agttgctgca atacgtgaag aactgaagga tattgagatt atctacaaac 120

ccctttcaga aatgctcacc tgtgctggcg aagcagattt agttttcacc agtactgcat 180

cagaaaaccc attattcttg aaagaacatg tcaaggacct tcctcctgca agtcaagaag 240

ttggaggccg tcgctttttc attgatatct ctgttccccg gaatgtgggt tcatgtgtct 300

cagaccttga gtctgtgcga gtttacaatg ttgacgacct taaagagggt gtggctgcc 360

ataaagagga tcgcctaaga aaagcaatgg acgcacaggg aatcattgct gaaaaatcta 420

agcaat 426

<210> 297

<211> 271

<212> DNA  
 <213> Glycine max  
 <400> 297  
 aggataggct aagaagagcc atggaggctc aagcaatcat tggatgaagaa tcaaaacaat 60  
 ttgaggcttg gagagactca ttggaaactg ttcctaccat taaaaagttg agggcatatg 120  
 ctgaaagaat aaggcttgct gagcttgaga agtgcctagg taagatgggt gatgatatca 180  
 acaagaagac acaaagagct gtggatgatc ttagcagggg tatagtgaat aagttgcttc 240  
 atggggccaat gcaacacttg aggtgtgatg g 271

<210> 298  
 <211> 266  
 <212> DNA  
 <213> Glycine max  
 <400> 298  
 agaaaagcca tggaggctca agcaatcatt ggtgaagaat caaaacaatt tgaggcttgg 60  
 agagactcat ttgaaactgt tcctaccatt aaaaagttga gggcatatgc tgaaagaata 120  
 aggcttgctg agcttgagaa gtgcctagggt aagatgggtg atgatatcaa caagaagaca 180  
 caaagagctg ttgatgatct tagcaggggt atagtgaata agttggcttc atggggccaat 240  
 gcaacacttg agtgtgatgg cagtga 266

<210> 299  
 <211> 289  
 <212> DNA  
 <213> Glycine max  
 <400> 299  
 cacaattctc ccttcaaagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60  
 gaggctttgt tgctgaaatg tggttcctcc aatgctgcc aaccaccac tcatatatca 120  
 tgttttggca aaaacagaaa gacacttggt cagagtcaga gaggggctat tcgttgtag 180  
 gcttcttctg cttctgatgt tgtggctgat gccaccaaga aagctgctag tgtctctgct 240  
 cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaagga 289

<210> 300  
 <211> 289



<212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 300  
 cacaattctc ccttcanagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60  
 gaggcctttgt tgctganatg tggttcctcc aatgctgcc aaccaccac tcatatatca 120  
 tgttttggca aaaacagaaa gacacttggt cagagtcaga gaggggctat tcgttgtgag 180  
 gcttctnctg cttctgatgt tgtggctgat gccaccaaga aagctgctan tgtctctgct 240  
 cttgagcagc ttaagacctc tgcagctgat aggtatacna aggaaagga 289

<210> 301  
 <211> 266  
 <212> DNA  
 <213> Glycine max  
 <400> 301  
 cagggccttga ctcaattggt cttggggaag gtcaaattct tgctcaggtg aagcaggttg 60  
 tgaaagctgg acagggagtg cctggttttg ataagaaaat cagtggtttg ttcaagcagg 120  
 cgatatcggg tgggaagcgg gttagaaccg agactaacat ttcattctga tcagtttctg 180  
 taagctcggc tgctgtggag cttgcactga tgaagctacc ggaaattacc tttgctgatt 240  
 ctggagtggt ggtgggttgg gctggg 266

<210> 302  
 <211> 275  
 <212> DNA  
 <213> Glycine max  
 <400> 302  
 cgcgcacatc tatttgaagt ggcgtcaggg cttgactcac ttgttcttgg ggaaggtcaa 60  
 attcttgctc aggtgaagca ggttgtgaaa gctggacagg gaggcctgg ttttgataag 120  
 aaaatcagtg gtttgttcaa gcaggcgata tcggttggga agcgggtag aaccgagact 180  
 aacatttcat ctggatcagt ttctgtaagc tcggctgctg tggagctgca ctgatgaagc 240  
 taccggattc ctcttttget gattctggag tgttg 275

<210> 303

<211> 288  
 <212> DNA  
 <213> Glycine max

<400> 303

cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaaggag cagcatcatg 60  
 gttattggac tgagtgtgca tagtacacct gtggaaatgc gtgaaaaact tgccatacca 120  
 gaagcagaat ggccaagagc cattgcggag tttgtagtct gaatcatatt gaggaagcag 180  
 ctgttctgag cacctgcaac agaatggaga tatatgttgt tgctctgtcc aagcaccgcg 240  
 gtgtcaaaga agtcactgaa tggatgtcca aaacaagtgg gatccccg 288

<210> 304  
 <211> 299  
 <212> DNA  
 <213> Glycine max

<400> 304

agtgtgcata gtacacctgt ggaaatgcgt gaaaaacttg ccataccaga agcagaatgg 60  
 ccaagagcca ttgcggagtt ttagtctga atcatattga ggaagcagct gttctgagca 120  
 cctgcaacag aatggagata tatgttggtg ctcttccaag caccgcgttg tcaaagaagt 180  
 cactgaatgg atgtccaaaa caagtgggat cccggttgca gacctttgcc agcatcagtt 240  
 tctgctatac aacaaagatg cgacacagca cctttttgaa gtatctgctg gtcttgatt 299

<210> 305  
 <211> 260  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations

<400> 305

gagcagcatc atggttattg gactgagtgt gcatagtaca cctgtggaaa tgcgtgaaaa 60  
 acttgccata ccagaagcag aatggccaag agccattgcg gagttttag tctgaatcat 120  
 attgaggaag cagcngttct gagcacctgc aacagaatgg agatatatgt ngttgctctg 180  
 tccangcacc gcggtgtcaa agnagtcact gaatggntgt ccaaaacaag tnggntcccc 240  
 gttgcagact ttgccagcat 260

<210> 306  
 <211> 440  
 <212> DNA  
 <213> Glycine max  
  
 <400> 306  
  
 gggtttctct gaatccgcaa tggccgtttc aaccactttc tccggtgcca aattggaggg 60  
 gctattgctc aaatgttctt cctcctcttc ctcaccaccg ctttcaaggt catcattcac 120  
 cacttttccc ggccaaaaca gaagaaccct cattcagaga ggggttattc gctgcgacgc 180  
 tcagccctct gatgcatcat ctgttgetcc aaataatgcc accgctctct ccgctcttga 240  
 gcagctcaag acttctgcag ctgatagata tacaaggaa agaagcagca ttatcgccat 300  
 tgggctcagt gtgcacactg cacctgtgga aatgcgtgaa aaacttgcca ttccagaagc 360  
 agaatggcct agagctattg cagagctgtg tagtctgaat catatttgag aagcagctgt 420  
 tctgagtacc ctgcatcgaa 440

<210> 307  
 <211> 272  
 <212> DNA  
 <213> Glycine max  
  
 <400> 307  
  
 ctgaaatcaa ggttgttgct ggtgaccctt ataactcaga cccacaagat ccagaattca 60  
 tgggtgttga agtcagagag cgtgtacttc caaggagagg aactttctgt tgtcttgacc 120  
 aaaattaaca tggttgattt gcattgggag ctacagaaga tagagtgtgt ggaacaattg 180  
 acattgagaa agccctgact gaggggtgtca aggcatttga gcctggacta tggctaaagc 240  
 taatagggga atctatatgt tgatgaagtt aa 272

<210> 308  
 <211> 254  
 <212> DNA  
 <213> Glycine max  
  
 <400> 308  
  
 gtcttacaac ggcttttagag ttggactaaa tgcggagaaa agtggtgacg ttggacgtat 60  
 aatgattggt gcaatcactg atggcagagc caatatatca ttgaaaaggt caactgaccc 120  
 tgaagctgcc gcagctactg atgccccaaa accttcagca caagaattga aggatgaaat 180

tcttgagggtg gccggaaaaga tatataaaagc aggaatgtct ctccttgtca tcgacactga 240  
aaataagttt gtct 254

<210> 309  
<211> 253  
<212> DNA  
<213> Glycine max

<400> 309

actttctgtt gtcttgacca aaattaacat ggttgatttg ccattgggag ctacagaaga 60  
tagagtgtgt ggaacgattg acattgagaa agccctgact gaggggtgtca aggcatttga 120  
gcctggacta ctggctaaag ctaatagggg aatcttatat gttgatgaag ttaatctttt 180  
ggatgatcac ttggtggatg tgttgttgga ttctgctgcg gatggaacac agtagagaga 240  
gaggaattt cta 253

<210> 310  
<211> 253  
<212> DNA  
<213> Glycine max

<400> 310

tgttactctt aacagagaac aattaaaata cctggttatt gaagctttac ggggcggttg 60  
ccaggacat agagctgac tatttgctgc ccgtgttgca aagtgccttag ctgctttgga 120  
gggacgtgaa aaggtttatg tggatgacct aaaaaagct gtagaattgg tcattctacc 180  
ccggtcaatc gttactgaga acccaccaga tcaacaaaac cagcctcctc cccctccgcc 240  
tcctccacaa aat 253

<210> 311  
<211> 162  
<212> DNA  
<213> Glycine max

<400> 311

gcatgatgat ctccacatgt ctgtctgtca actaaaacac tattgcgttt catgatatat 60  
caaattgtga acatgctatg tgtaaatgtt tctttaaagc ataatccata gccccttatg 120  
tttaaatcaaa ccaaaattat gccctagttt tttttttttt gg 162

<210> 312  
 <211> 232  
 <212> DNA  
 <213> Glycine max

<400> 312

aaaaaagaac agagagagaa gaatgaaatc tatctatctt cttatccgaa gtctgggagg 60  
 ccaataggaa gcacgccagc tgctacgaat ggtgaataaa agacaaaaga aacaaactgc 120  
 tacatagcat acagtctgtc ttctcttctc ttctccggtt atggcggtccg ccttgggcac 180  
 ttcttcaatt gcggttctgc ctctcgctccta cttctcttct tcttcttcca ag 232

<210> 313  
 <211> 262  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 313

cacttaatcc aggctcagaa gattgctttt aacgagagcc agangccggt gtacccattt 60  
 tctgctatag tgggacacga tgagatgaag ctttgccttc tcctaaatgt aattnatccc 120  
 aagattggag gtgtaatgat catggggggac agaggaacgg ggaaatctac aactgttaga 180  
 tcattggtag atttgcttcc tgaatatcaag gttgttgctg gtgaccatat attcagaccc 240  
 agaggatcca gattcatggg tg 262

<210> 314  
 <211> 280  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 314

actctctcta acttcagggc agagctatgg gcggaaattt tatggaggaa ttggaattca 60  
 tggcatcaag ggaaggctct agctctcagt tgccaatgtt gccactgaag ttaactctgt 120  
 agaacaggcc caaagtattg cttctaaaga aagccagagg ccagtatacc cattttctgc 180  
 catagtngga caagatgaga tgaagctttg tcttctcctt aatgtgattg atcctaagat 240  
 tggaggtgta atgatcaggg ggataggggc acagggaat 280

<210> 315  
 <211> 238  
 <212> DNA  
 <213> Glycine max

<400> 315

ttttgctcgg aatttcctgt gtagaaggaa ctcatgaatc ttattgatgt ttaacgacaa 60  
 tgaaaatctc cacagaaaag gtaaaatgta aataatgaag tagcattata ctcatggaat 120  
 accacagaat acaaaccgtg ttacatctat gatcctcagc tgaatacctc ataaaatttc 180  
 tcagtgcacaa gtaaacctga gtctatagac tccaagggat cctttctaag acggtgtc 238

<210> 316  
 <211> 273  
 <212> DNA  
 <213> Glycine max

<400> 316

ttagggaagg gctcagctct cggttaccaa tgttgccact gaagttaact ctgtagaaca 60  
 ggctcagagt attgcttcta aagaaagcca gaggccagta taccattttt ctgccatagt 120  
 tggacaagat gagatgaagc tttgtcttct ccttaatgtg attgaccta agattggagg 180  
 tgtaatgac atgggggata ggggcacagg gaaatctaca acggtcaggt cattggttga 240  
 tttacttccc gaaatcaagg ttgttgctgg tga 273

<210> 317  
 <211> 283  
 <212> DNA  
 <213> Glycine max

<400> 317

agactcattg gatcggttga tgttgaggag tctgtgaaaa caggcacaac tgttttccag 60  
 ccaggccttg ttgcagaagc tcatagaggt gttttatatg ttgatgaaat taatcttttg 120  
 gatgagggtg tcagtaattt gtccttact gtattgagtg aaggagtaaa tactgttgaa 180  
 agagagggga tcagtttcaa gcacccttgc aggcccttc tcattgccac ctataacca 240  
 gaagaggggtg ctgttcgtga acatctgctg gaccgcattg cga 283

<210> 318  
 <211> 173  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 318  
  
 gctcgaggcg ccgntcanac gacgagccgc gagtgcgtgg cggcgtggga cgaggtggag 60  
 gagctgagcg cggcggcgag ccacgccaaa tacaagctaa aggaaaagga ctccgacccg 120  
 ctcgagacct actgcaagga caatccggag accattgagt gcaaaacttt cga 173

..  
 <210> 319  
 <211> 263  
 <212> DNA  
 <213> Glycine max  
  
 <400> 319  
  
 aggaattccg agattcttac aaagccgagc aagagaagct ccaacaacaa attacatcag 60  
 caaggagtgt tctttcttct gttcagattg atcaagatct caaggtgaaa atctccaagg 120  
 tgtgtgctga gttgaatgtg gatggattaa gaggagacat agtaacaaat agagctgcaa 180  
 aagctcttgc tgctctgaag gaaagagaca aagtaagtgc agaggatatt gctactgtca 240  
 tccctaactg cttgagacac cgt 263

<210> 320  
 <211> 322  
 <212> DNA  
 <213> Glycine max  
  
 <400> 320  
  
 atagcttttg gagcaaaaac tgcacaaagc tcctcagtgc cccccaagtt ttcctttcaa 60  
 agcaattttg tgctttgctt tgaatgtctt ccttttcgat ccctacactt caatttgtag 120  
 caagaggaat ttgttgtttc ctacttagca tgattattta tcaatggcgt ctttggtatc 180  
 ttcagcattt actcttccaa gctctaaacc tgaccagctt caatcacttg ccccgaaaca 240  
 tctttttcat cagtcattcc ttcccaagaa agccaattac aatggtagct caaaatcctc 300  
 tctgaaaatt aaatgtgctg tc 322

<210> 321

<211> 410  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 321  
  
 cagtcattac tttgactcan accccgacta atctggntca gaatctaagg aaagatggga 60  
 agaagcctag tgcatacatt gctgatacaa ccacagccaa tgctcaggta cgtacactnt 120  
 ctgagacggt tagacttgac gcaagaacca agctgttgaa tccaaagtgg tatgaaggca 180  
 tgttgtctac tggatatgag ggtgtacgag agatcgagaa gagactcacc aatacagtgg 240  
 ggtggagtgc aacttcaggc caagttgata actgggtgta tgaagaagcc aacacaactt 300  
 tcattcaaga tgagcaaattg ctgaacaagc tcatgagcac taatccaaac tccttcagga 360  
 aactggtgca gacattcttg gaagccaatg gacgtgggta ttgggaaact 410

<210> 322  
 <211> 324  
 <212> DNA  
 <213> Glycine max  
  
 <400> 322  
  
 gaaaaataac acacatttga aactcaaact gaaatgggtg catagctttg gggcaaaaac 60  
 tacacaaaac tcctcattgc cccaagttt tttctttcaa agcaattttg cacttttttg 120  
 ctttcattgt cttcaatttg tagtaagagg aaattgttgt ttcctactta gcttgattat 180  
 tattatcaat ggcttcttta gtatcttcac aatttacact accaagttct aaacctgacc 240  
 agcttcattc tcttgctcag aagcatcttt ttctccactc tttccttccc aagaaggcca 300  
 attacaaatgg tagcagctca aaat 324

<210> 323  
 <211> 340  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 323  
  
 gaagaagtaa tacatgacaa agaagctcaa tttagcagcc caaatctgaa cgttgcttac 60  
 aaaatgaatg tccgagaata ccaaagtcta actccctatg ccacagcatt agaagaaaac 120



tggggaaaac ctctgggaa tctgaattca gatggagaga atctattggt atatgggaaa 180  
 caatatggta atgtattcat aggtgttcaa cccacatttg gctatgaagg cgatcctatg 240  
 cggttgcttt tctccaaatc tgcaagtcc catcatggat ttgcagcatn atactctttt 300  
 gtttgagaaa ttttcaaagc tgaagcgggt cttcattttg 340

<210> 324  
 <211> 264  
 <212> DNA  
 <213> Glycine max

<400> 324

ggccaagaac agaatgaaga ggaagaacaa gaggatgaca aggatgaaga gaatgaacaa 60  
 cagcaagaac aattacctga agagtttatac ttgatgctg aaggtggctt ggtagatgaa 120  
 aaactcctct tctttgcca acaagcacag agacgccgtg ggagggctgg aagggcaaaa 180  
 aatgttatat tttccgagga tagaggccga tacatcaagc ccatgcttcc aaagggccct 240  
 gtaaagagat tagctgtaga tgca 264

<210> 325  
 <211> 246  
 <212> DNA  
 <213> Glycine max

<400> 325

caaatcaag aatcaggcga agaacagaat gaagaggaag aacaagagga tgacaaggat 60  
 gaagagaatg aacaacagca agaacaatta cctgaagagt ttatctttga tgctgaagggt 120  
 ggcttggttag atgaaaaact cctcttcttt gcccaacaag cacagagacg ccgtgggagg 180  
 gctggaaggg caaaaaatgt tatatcttcc gaggatagag gccgatacat caagcccatg 240  
 cttcca 246

<210> 326  
 <211> 264  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 326

cnagagcaga gaagantcag agaatggcaa ctatgactgg cgtgagcctt tcatgccccca 60

gggtttttctt caacgcatca ggctcaccgc aaaacgcgca tgcttattgt attttgtcca 120  
gcagattcta tgacttgaca ggactgcaga atggaattct gaagcgaggg agagagattt 180  
tcctcactgg ttgctacctc cgaactccca ctggagggttc tggacattca cgtcttttgc 240  
caacagagta tcttgtgatt ctat 264

<210> 327  
<211> 284  
<212> DNA  
<213> Glycine max  
<223> unsure at all n locations  
<400> 327

cagagaagaa tcagagaatg gcaactatga ctgnngtgag cntttcatgc cccaggggttt 60  
tcttcaacgc atcaggctca ccgcaaaacg cgcattgctta ttgtattttg tccagcagat 120  
tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag attttcctca 180  
cnngttgcta cctccgaact cccactggag gttctggaca ttcacgtctt ttgccaacag' 240  
agtatcttgt gattctattg gatgaagact tccagaagga aatt 284

<210> 328  
<211> 392  
<212> DNA  
<213> Glycine max  
<400> 328

ggccgatata tcaagcccat gcttccaaag ggccctgtaa agagattagc tgtagatgca 60  
acccttagag ctgctgcacc ttatcaaaaa ttgcgaaggg caaaagattc tggaaacaat 120  
agaaaggat tttgtggagaa aacggacatg agggcaaaga gaatggcacg taaggcagga 180  
gcattgggtga tatttgttgt tgatgcaagt ggaagcatgg cattgaacag gatgcagaat 240  
gcaaaagggtg cagcacttaa gcttctggct gaaagttata caagcaggga tcaggtatct 300  
ataattccat tccgtggaga tgcagctgaa gttctcctgc caccttctag atcaatttca 360  
atggcaagga aacgtcttga aaggcttcca tg 392

<210> 329  
<211> 274  
<212> DNA

<213> Glycine max

<400> 329

gtggagaaaa cggacatgag ggcaaagaga atggcacgta aggcaggagc attggtgata 60  
tttgttggtg atgcaagtgg aagcatggca ttgaacagga tgcagaatgc aaaaggtgca 120  
gcacttaagc ttctggctga aagttatata agcaggggac aggtatctat aattccattc 180  
cgtggagatg cagctgaagt tctcctgcc ccttctagat caatttcaat ggcaaggaaa 240  
cgtcttgaaa ggcttccatg tgggtggaggt cccc 274

<210> 330

<211> 247

<212> DNA

<213> Glycine max

<400> 330

attagctgta gatgcaaccc ttagagctgc tgcaccttat caaaaattgc gaagggcaaa 60  
agattctgga aacaatagaa aggtatttgt ggagaaaacg gacatgaggg caaagagaat 120  
ggcacgtaag gcaggagcat tggatgatatt tgttggtgat gcaagtggaa gcatggcatt 180  
gaacaggatg cagaatgcaa aaggtgcagc acttaagctt ctggctgaaa gttatacaag 240  
cagggat 247

<210> 331

<211> 292

<212> DNA

<213> Glycine max

<223> unsure at all n locations

<400> 331

tngagggcaa agagaatggc acgtaaggna ggancatcgg tgatatttgt ggttgatgca 60  
agtggaaagca tggcattgaa caggatgcag aatgcaaaag gtgcagcact taagcttctg 120  
gctgaaagtt atacaagcag ggatcaggtc tctaaattcc attccgtgga gacgcagctg 180  
aagttcttct gccaccttct agatcaattg caancgnaag gaaacgtctt gagaggctcc 240  
atgtggtgga ggggtccccac ttgctcaggt ctacaacggc tgtagagtt gg 292

<210> 332

<211> 378

<212> DNA  
 <213> Glycine max  
 <400> 332  
 agacgggtgc gagaagacga cagaagggga taagtgccat aacacataaa cagaatggct 60  
 tccacgtttg ggcacatcttc aattaccttc ctctcttcac gatactactc gtctcaggcc 120  
 cttgccaccg attcaccctc tctaaccaca gtgcagatat ttgggcgcaa gttttgcgga 180  
 ggaagaaatg gatttcacag cgtcaaggga aggtctctgt tcgcggttgc gagtgttctt 240  
 gccactcaac ttaactctgc ataataggct cagaagattg cttttaccga gagccagagg 300  
 tcagtgtacc cattttcggc tatagttgga caggatgaaa tgaagctttg cttctccta 360  
 aatgtgattg atcccaa 378

<210> 333  
 <211> 277  
 <212> DNA  
 <213> Glycine max  
 <400> 333  
 aaaaagaatg gcttccacgt ttggcgcac ttcaattacc ttctctctt cagatacta 60  
 ctcttcccaa tcccttgcca ccgattctc ctctctaacc acagtgcaga tatttgggcg 120  
 caagttttgc ggcggaggaa atggatttca cagcgtcaag ggaaggctc tgttcccggt 180  
 tgcgagtgtt cttgccactc aacttaactc tgcacaacag gtcagaaga ttgcttttac 240  
 cgagagccag aggccagtgt acccatttcg gctatag 277

<210> 334  
 <211> 256  
 <212> DNA  
 <213> Glycine max  
 <400> 334  
 taaaaagaat ggcttccacg tttggcgcac cttcaattac cttctctctt tcacgatact 60  
 tctcttccca atcccttgcc accgattctc cctctctaac cacagtgcag atatttgggc 120  
 gcaagttttg cggcggagga aatggatttc acagcgtcaa gggaaggctc ctgttcccg 180  
 ttgcgagtgt tcttgccact caacttaact ctgcacaaca ggctcagaag attgctttta 240  
 ccgagagcca gaggcc 256

<210> 335  
 <211> 396  
 <212> DNA  
 <213> Glycine max

<400> 335

ggcaactatg actggtgtga gcctttcatg cccaggggtt ttcttcaacg catcagcctc 60  
 accgcaaaac ggcgatgctg taaagttctc acttccaccc agccaagcag tgcgaccggg 120  
 tagtatcaag ttgggtcgcg tgatgaggat ccgaccggtt cgcgctgcgc ctgagcgcat 180  
 atcggagaag gtggaggaga gcataaagaa cgcgcaggag gcgtgcgccg gcgatccgac 240  
 gagcggcgag tgcgtggcgg cgtgggacga ggtggaggag ctgagcgcgg cggcgagcca 300  
 cgccagggac aagcaaaagg aaaaggactc cgaccgcctc gagaattact gcaaggacaa 360  
 cccggagacc attgagtgca aaactttcga agactg 396

<210> 336  
 <211> 356  
 <212> DNA  
 <213> Glycine max

<400> 336

gagaatggca actatgactg gtgtgagcct ttcattgccc aggggtggtct tcaacgcatg 60  
 agcctcaccg cataacgcgc atgctgtaaa gttctcactt ccaccagcc aagcagtgcg 120  
 accgggtagt atcaagttgg gtcgctgat gaggatccga cccgttcgcg ctgcgcctga 180  
 gcgcatatcg gagaagggtg aggagagcat aaagaacgcg caggaggcgt gcgccgacga 240  
 tccgacgagc ggcgagtgcg tgacggcgtg ggacgaggtg gaggagctga gcgcggcggc 300  
 tagccacgcc agggacacgc aaatggtaat ggacttcgac ccgctcgaga attact 356

<210> 337  
 <211> 273  
 <212> DNA  
 <213> Glycine max

<400> 337

agaatggcaa ctatgactgg tgtgagcctt tcatgcccc gggttttctt caacgcatca 60  
 gcctcaccgc aaaacgcgca tgctgtaaag ttctcacttc caccagcca agcagtgcga 120

ccgggtagta tcaagttggg tcgctgatg aggatccgac cgttcgcgc tgcgcctgag 180  
 cgcatatcgg agaaggtgga ggagagcata aagaacgcgc aggaggcgtg cgccggcgat 240  
 ccgacgagcg gcgagtgcgt ggcggcgtgg gac 273

<210> 338  
 <211> 272  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 338

aagaatcaga gaatggcaac tatgactggt gtgagccttt catgccccag ggttttcttc 60  
 aacgcatacag cctcaccgca aaacgcgcac gctgtaaagt tctcacttcc acccagccaa 120  
 gcagtnccgac cgggtagtat caagttgggt cgcgtgatga ggatccgacc cgttcgcgct 180  
 gcgcctgagc gcatatcggg gaaggtggag gagagcataa agaacgcgca ggaggcgtgc 240  
 gccggcgatc cgacgagcgg cgagtgcgtg gc 272

<210> 339  
 <211> 273  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 339

gaatcagaga atggcaacta tgactggtgt gagcctttca tgccccaggg ttttcttcaa 60  
 cgcatacagc tcaccgcaaa acgcgcacgc tgtaaagtgc tcacttccac ccagccaagc 120  
 agtccgaccg ggtagtatca agttgggtcg cgtgatgagg atccgaccg ttcgngtgcg 180  
 cctgagcgca tatcggagaa ggtggaggag agcataaaga acgcgcagga ggcgtgcgcc 240  
 ggcgatccga cgagcggcga gtgcgtggcg gcg 273

<210> 340  
 <211> 253  
 <212> DNA  
 <213> Glycine max  
 <400> 340

cagagaatgg caactatgac tggtgtgagc ctttcatgcc ccagggtttt cttcaacgca 60

tcagcctcac cgcaaaacgc gcatgctgta aagttctcac ttccaccag ccaagcagtg 120  
 cgaccgggta gtatcaagtt gggtcgctg atgaggatcc gaccggttcg cgctgcgcct 180  
 gagcgcatat cggagaaggt ggaggagagc ataaagaacg cgcaggaggc gtgcgccggc 240  
 gatccgacga gcg 253

<210> 341  
 <211> 283  
 <212> DNA  
 <213> Glycine max  
 <223> unsure at all n locations  
 <400> 341

gtaactatga ctggtgtgag cctttcatgc cccagggttt tcttcaacgc atcagcctca 60  
 ctgnaaaacg cgcatgatgt aaagttctca cttccacaca gcatagaagg tggatcgggt 120  
 agtatcaagt tgggtcgcgt gatgaggatc cgagccgttc gcgctgcgcc tgagcgcata 180  
 tcggagaagg tggaggagag catacagaac gcgcaggagg cgtgcgccgg cgatcagttg 240  
 agcggcgagt gcgtggcggc gtgggacgat gtggaggagc tga 283

<210> 342  
 <211> 251  
 <212> DNA  
 <213> Glycine max  
 <400> 342

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcac 60  
 agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccaccagcc aagcagtgag 120  
 accgggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgcg ctgcgcctga 180  
 gcgcatatcg gagaaggtgg gagagcataa agaacgcgcg gaggctgcgc ggcgatccga 240  
 cgagcggcga t 251

<210> 343  
 <211> 271  
 <212> DNA  
 <213> Glycine max  
 <400> 343

aaacccccctc cagagaacaa gaatcaaaga atggcaacta tgactggtgt gagcctttca 60  
agccccaggg tttttttcaa cgcattcacc tcaccgcaaa acacgtacgc cgtaaagtgc 120  
gcagttccac tcagccaagg gatgcgactt ggtagtgtca ggttgggtcg ggtgatgagg 180  
atccgacccg ttcgcgcagt ccagagcgca tttcggagaa ggtggaggag agcataaaga 240  
acgcgcagga ggctgtgcc gccgacccga c 271

<210> 344  
<211> 257  
<212> DNA  
<213> Glycine max

<400> 344

gcctttcaag cccaggggtt ttcttcaacg catcaccctc accgcaaaac acgtacgccg 60  
taaagttcgc agttccactc agccaaggga tacgacttgg tagtgtcagg ttgggtcggg 120  
tgatgaggat ccgacccgtt cgcgcactcc agagcgcatt tcggagaagg tggaggagag 180  
cataaagaac gcgcaggagg cgtgcgccgg cgacccgacg agcggcgagt gcgtggcggc 240  
gtgggacgag gtggagg 257

<210> 345  
<211> 281  
<212> DNA  
<213> Glycine max

<223> unsure at all n locations  
<400> 345

gagaatggca actatgactg gtgtgagcct ttcattcccc agggttttct tcaacgcac 60  
agtctcaccg naaaacgcgc atgtgtgtaa gttctcactt tcanacagcc aagaagacac 120  
aaagggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgag ctgcgtctga 180  
gcgcatatcg gagaagggtg aggagagctg aaggaacgcg caggaggcgt gcgccggcga 240  
tccgacgagc ggcgagtgcg tagcggcggt ggacgaggtg g 281

<210> 346  
<211> 249  
<212> DNA  
<213> Glycine max

<400> 346



gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcac 60  
 agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccagccagcc tatgagtctt 120  
 accgggtagt agcaagttgg gtcgcgtgat gatgatccga cccgttcgcg ctgcgcctga 180  
 gcgcataatcg gagaaggtgg aggagagcaa acagaacgcg ctaggaggcg tacgccggcg 240  
 atccgacga 249

<210> 347  
 <211> 240  
 <212> DNA  
 <213> Glycine max

<400> 347

cgtccgatag gatgcgagaa gacgacagaa ggggagagaa caagaatcaa agaatggcaa 60  
 ctatgactgg tgtgagcctt tcaagcccca gggttttctt caacgcacaa ccctcgccgc 120  
 aaaacacgta cgccgtaaag ttcgcagttc cactcagcca agggactcga cttggtagtg 180  
 tcaggttggg tcgggtgatg aggatgcgag cccgttcgcg agctccagag cgcagttcgg 240

<210> 348  
 <211> 91  
 <212> DNA  
 <213> Glycine max

<400> 348

gagaatggga actatgactg gtgtgagcgt ttcatgcgcc agggttttct gcaacgcac 60  
 agcgtcaggg caaaacgcgc atagtgtaaa g 91

<210> 349  
 <211> 119  
 <212> DNA  
 <213> Glycine max

<400> 349

ctcgagccga gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct 60  
 tcaacgcac agcctcagg caaaacgcgc atgctgtaaa gttctcactt ccaccagc 119

<210> 350  
 <211> 175

<212> DNA  
<213> Glycine max

<400> 350

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgccccca gggtttttctt 60  
caacgcatca gcctcaccgc aaaacgcgca tgctgtaaag ttctcacttc caccagacca 120  
agcagtgcga ccgggtagta tcaagttggg tcgctgatg aggatccgac ccgtt 175

<210> 351  
<211> 285  
<212> DNA  
<213> Glycine max

<400> 351

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgccccca gggtttttctt 60  
caacgcatca ggctcaccgc aaaacgcgca tgctgtaaag ttctctttta ttgtattttg 120  
tccagcagat tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag 180  
attttcctca ctggttgcta cctccgaact cccactggag gttctggaca ttcacgtctt 240  
ttgccaacag agtatcttgt gattctattg gatgaagact tccaa 285

<210> 352  
<211> 111  
<212> DNA  
<213> Glycine max

<223> unsure at all n locations  
<400> 352

gaatggcaac tatgactggt gtgagccttt natgccccag gggttttcttc aacgcatnag 60  
cntcacnngn aaaacgcgca tgctgtaaag ttctcanttc cacacaacat a 111

<210> 353  
<211> 156  
<212> DNA  
<213> Glycine max

<400> 353

cttagacctc atcatcataa acccctcca gagaacaaga aacatccgaa tggcaactat 60  
gactggtgtg agcctttcaa gcccagggg tttcttcaac gcatcaccct caccgcaaaa 120

cacgtacgcc gtaaagttcg cagttccact cagcca 156

<210> 354  
 <211> 136  
 <212> DNA  
 <213> Glycine max

<400> 354

tcatacataaa cccctccag agaacaagaa tcacagaatg gcaactatga ctggtgtgag 60

cctttcaagc ccaggggttt tcttcaacgc atcacctca ccgcaaaaca cgtacgccgt 120

aaagttcgca gttcca 136

<210> 355  
 <211> 85  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 355

ctatgactgg tgtgagcctt tcaagcccca gggttntctt caacgcatca ccctcacngc 60

aaaacacgta cgccgtaaag ttgcg 85

<210> 356  
 <211> 356  
 <212> DNA  
 <213> Glycine max

<400> 356

ctctctgaaa tgggtttcgc tttggcatatc acagcatctg gttgttgctc aaacctataa 60

tttcagtctc tggtattcgc tgctgcttca ttgagatcaa aaccgtgtct ctctctctgc 120

aactctactt atcgacccaa acgcattctc cagcgttctc caattgttgg cgctcagtct 180

gaaaatggag ctctggttac ttccggagaag cccgacacta attacggaag acaatacttc 240

cccctcgtctg ctgttgtagg ccaagattct ataaaaactg ctcttttact tgggtgcaatt 300

gaccccgggg ttggaggaat tgccatatca ggaaagcgag gaactgccaa aactgt 356

<210> 357  
 <211> 339  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 357

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anatggggttt cgctttggca ttcacagctt cttctacttg ctgntcaaatt ctacaatctc 60
agtctctgtt attcgctgct gctgcattga gatcaaaacc gtgtctctct ctctgcaaca 120
cttatcgacc caaacgcatt cggaagcggt ctcnaattgt tggcgctcaa tctgaaaacg 180
gagctctcgt tacttccgag aagcctgaca ctaattacgg nagacaatac ttccccctcg 240
ctgctgttgt aggccaagat gctataaaaa ctgctctttt acttggggcc attgaccctg 300
ggattggagg aattgccata tcatgaaagc gaggnactg 339

```

<210> 358  
 <211> 284  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 358

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tccggttatg gcgtccgcct tgggcacttc ttcaattgcn gttctgcctt cgcgctactt 60
ctcttcttct tctctccagc cttccattca cactctctct nnaacttcag ggcagaacta 120
tgggcggaag ttttatggag gaattggaat ccatggcata aagggaagg ctcagctctc 180
ggttaccaat gttgccactg aagttaactc tgnagaacag gctcagagta ttgcttctaa 240
aganagccag aggccagtat acccattttc tgccatantt ggnc 284

```

<210> 359  
 <211> 263  
 <212> DNA  
 <213> Glycine max

<400> 359

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tggcgctcgc cttgggcact tcttcaattg cggttctgcc ttcgcgctac ttctcttctt 60
cttcttccaa gccttccatt cacactctct ctctaacttc agggcagaac tatgggcgga 120
agttttatgg aggaattgga atccatggca taaagggaag ggctcagctc tcggttacca 180
atgttgccac tgaagttaac tctgtagaac aggctcagag tattgcttct aaagaaagcc 240
agaggccagt atacccattt tct 263

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<210> 360  
 <211> 280  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 360  
  
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 gttctgcctt cngggtaactc tcttcttctt cttccaagcc ttccattcac actctctctc 120  
 taacttcagg gcagaactat gggcggaagt tttatggagg aattggaatc catggcataa 180  
 agggaagggc tcagctctcg gttaccaatg ttgccactga agttaactct gtagaacagg 240  
 ctcagagtat tgcttctaaa gaaagccaga ggccagtata 280

<210> 361  
 <211> 278  
 <212> DNA  
 <213> Glycine max  
  
 <223> unsure at all n locations  
 <400> 361  
  
 tctgctccgg ttatggcntc cgncttgggc acttcttcaa ttgcngntct gccttnncng 60  
 ctacttctct ncntcttctt ccaagccttc cattcanact cncctctctaa cttcanggca 120  
 gaactatggg cggaagtttt atggaggaat tggaatccat ggnataaang gaagggctca 180  
 gctctcggtt accaatgttg ncantgnagt taactctgna naacaggctc agantattgc 240  
 ttctaaagaa agccagagggc cagtataccc attttctg 278

<210> 362  
 <211> 283  
 <212> DNA  
 <213> Glycine max  
  
 <400> 362  
  
 attgctacat agcacacact ccctcttctc ttctacgggt atggcgcca cgttgggcac 60  
 ttcttcaatt gcggttcttc cttcgcgctg catctcttct ttttcttcca agccttccat 120  
 tcacacactc tctctaactt cagggcagag ctatgggcgg aaattttatg gaggaattgg 180  
 aattcatggc atcaagggaa ggtctcagct ctcagttgcc aatgttgcca ctgaagttaa 240  
 ctctgtagaa caggcccaaa gtattgcttc taaagaaagc cag 283

<210> 363  
 <211> 273  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 363

gnaacaaatt gctacatagc acacactccc tcttctcttc tacggttatg gcgtccacgt 60  
 tgggcacttc ttcaattgcg gttcttcctt cgcgctgcat ctcttctttt tcttccaagc 120  
 cttccattca cacactctct ctaacttcag ggcagagcta tgggcggaaa ttttatgnag 180  
 gaattggaat tcatggcatc aagggaaggt ctcagctctc agttgccaat gttgccactg 240  
 aagttaactc tgtagaacag gcccaaagta ttg 273

<210> 364  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<400> 364

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60  
 cacttcttca attgcggttc ttccttcgcg ctgcatctct tcttttctt ccaagccttc 120  
 cattcacaca ctctctctaa cttcagggca gagctatggg cggaattttt atggaggaat 180  
 tggaattcat ggcataagg gaaggtctca gctctcagtt gccaatgttg cactgaagt 240  
 taactctgta gaacaggcc 259

<210> 365  
 <211> 253  
 <212> DNA  
 <213> Glycine max

<400> 365

acggctgcga aagacgacag aaggggacgg ttatggcgtc cacgttgggc acttcttcaa 60  
 ttgcggttct tccttcgcg tgcatctctt ctttttcttc caagccttcc attcacacac 120  
 tctctctaac ttcagggcag agctatgggc ggaaatttta tggaggaatt ggaattcatg 180  
 gcatcaaggg aaggtctcag ctctcagttg ccaatgttgc cactgaagtt aactctgtag 240

aacaggccca aag 253

<210> 366  
 <211> 243  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 366

aataaaagac aaaagaaaca aaangctaca tagcatacag tctgtcttct cttctcttct 60  
 ccggttatgg cgtccgcctt gggcacttct tcaattgogg ttctgccttc gcgctacttc 120  
 tcttcttctt cttccaagcc ttccattcac actctctctc taacttcagg gcagaactat 180  
 gggcggaagt tttatggagg aattggaatc catggcataa agggaagggc tcagctctcg 240  
 gtt 243

<210> 367  
 <211> 259  
 <212> DNA  
 <213> Glycine max

<223> unsure at all n locations  
 <400> 367

gcacacactc cctcttctct tctacggtta tggcgctcac gttgggcact tcttcaattg 60  
 cggttcttcc ttcgcgctgc atctcttctt tttcttccaa gccttccatt cacacactct 120  
 ctctaacttc agggcagagc tatgggcgga aattttatgg aggaattgga attcatgggc 180  
 atcaaggga ngtctcagct ctcagttgcc aatggtgcc ctgaagttaa ctctgtagaa 240  
 caggcccaaa gtattgctt 259

<210> 368  
 <211> 163  
 <212> DNA  
 <213> Glycine max

<400> 368

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60  
 cacttcttca attgcgggtt ttccttcgag ctgcattctt tcttttctt ccaagccttc 120  
 cattcacaca ctctctctaa cttcagggca gagctatggg cgg 163

<210> 369  
 <211> 151  
 <212> DNA  
 <213> Glycine max

<400> 369

gaaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60  
 cacttcttca attgcgggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120  
 cattcacaca ctctctctaa cttcagggca g 151

<210> 370  
 <211> 232  
 <212> DNA  
 <213> Glycine max

<400> 370

gaagaatgaa atctatctat cttcttatcc gaagcccggtg aggccaataa gaagcacgtc 60  
 agctgctatg aatgggtgaat aaaacacaaa agaaacaaat tgctacatag cacacactcc 120  
 ctcttctctt ctacggttat ggcgtccacg ttgggcactt cttcaattgc ggttcttctt 180  
 tcgcgctgca tctcttcttt ttcttccaag ccttccattc acacactctc tc 232

<210> 371  
 <211> 107  
 <212> DNA  
 <213> Glycine max

<400> 371

tacggctgga agacgacaga agggggaata aaacacaaaa gacacaaatt gctacatagc 60  
 acacactccc tcttctcttc tacggttatg gcgtccacgt tgggcac 107

<210> 372  
 <211> 235  
 <212> DNA  
 <213> Glycine max

<400> 372

ctcgagccga atcggctcga ggcagattaa aagggatgga attaccaagc ttgttattct 60  
 tccactttat ccacaatttt caatatcaac cagtggctca agcctacgtc tactggagag 120



tatattccga gaggatgagt atctagtcaa catgcagcac acagtaatac catcatggta 180  
tcaacgtgaa ggatacataa aggccatggc aaatttgatt gagaaagagt tgaga 235

<210> 373  
<211> 250  
<212> DNA  
<213> Glycine max

<400> 373

gaccaggcac ttgcaattaa aatggctttg gaagcaaagg gcattctctc aaatgtctac 60  
gttgggatgc gatactggta cccatttacc gaagaagcaa ttcagcaaat taagagggac 120  
agaataacaa ggcttgtggt actaccctt tatccccagt tttctatatc cacaactgga 180  
tcaagcatcc gtgttcttga gcataatctc aggaagatg cctacttgtc taagctccct 240  
gtttccatta 250

<210> 374  
<211> 254  
<212> DNA  
<213> Glycine max

<400> 374

ggaatgtgtt gatttgatca tggaagagct tgaaaagaga aagataacta atgcatacac 60  
ccttgcttat cagagtagag ttggacctgt ggaatgggta aaaccctata cagatgagac 120  
aataattgaa cttgggaaaa agggagtaaa aagcctgctg gctgtaccaa ttagctttgt 180  
cagcgagcat attgaaactc tcgaagaaat tgatgttgag tacaagaat tggctctaaa 240  
ctctggtata gaaa 254

<210> 375  
<211> 248  
<212> DNA  
<213> Glycine max

<400> 375

gaaaaagttg gtgtgctgct tctcaatcta ggaggaccag agacattgaa tgacgttcaa 60  
ccttttctgt ttaatctttt tgcagatcct gatatcattc gtcttccaag gttgtttcgg 120  
tttctccagc gaccattggc aaaattgatt tctgtacttc ggtctcctaa atccaaggaa 180

gggtatgctg ctattggtgg tggctctcct ttacgcaaaa ttacagatga ccaggcactc 240  
gcaattaa 248

<210> 376  
<211> 275  
<212> DNA  
<213> Glycine max

<400> 376

aattgacatg gagtacaagg aattggctct tgaatctggc atcaagaatt gggcacgtgt 60  
acctgccctt ggtgttaccc cttccttcat tacagattta gcagatgcag taatagaagc 120  
tctcccatca gcaacagcaa tatatgcacc gaccagaacc tctgaagatg ttgatcatga 180  
cccagttaga tattttatca agatgttctt tgggttcaatc ttggcattca tcttgttctt 240  
gtcacccaaa atgatcacgg cattcaggaa tcatg 275

<210> 377  
<211> 288  
<212> DNA  
<213> Glycine max

<400> 377

ccttccttca tacagattta gcagatgcag taatagaagc tctcccatca gcaacagcaa 60  
tatatgcacc gaccagaacc tctgaagatg ttgatcatga cccagttaga tattttatca 120  
agatgttctt tgggttcaatc ttggcattca tcttgttctt gtcacccaaa atgatcacgg 180  
cattcaggaa tcatgtcatt tagaagaatt aaatcctgct tgctgaattc aatctgcaag 240  
catatagatg aagcctattg atagcaacaa agtatacttt gatttttt 288

<210> 378  
<211> 282  
<212> DNA  
<213> Glycine max

<400> 378

atggaaaaaa gggagtgaag agtctgctcg ctgttccaat tagcttcgtc agtgagcata 60  
ttgaaactct agaagaaatt gatgttgaat acaaagagtt ggctctagaa tctggtatag 120  
aaaagtgggg ccgtgttctt gctctaggat gcgaacctac cttcatttct gatttggcag 180

atgccgttat tgagagtctc ccatatgttg gtgccatgac agcttcagac cttgaagctc 240  
aacaatcctc gttccatggg cagtgtagaa gagttattgg ca 282

<210> 379  
<211> 237  
<212> DNA  
<213> Glycine max  
<400> 379

catccgtgtt cttgagcata tattcagggg agatgcctac ttgtctaagc tccctgtttc 60  
cattataaac tcttggtatc aacgagaagg ttatattaag tcaatggcta acttaattca 120  
gaaagagctc cagagttttt ctgaaccaa agaggtaatg atatTTTTtca gtgccccatgg 180  
tgtacctgtc agttacgttg aggaagctgg ggatccatac cgagaccaa tggagga 237

<210> 380  
<211> 253  
<212> DNA  
<213> Glycine max  
<400> 380

actggatcaa gcatccgtgt tcttgagcat atattcaggg aagatgccta cttgtctaac 60  
ctccctgttt ccattataaa ctcttggtat caacgagaag gttatattaa gtcaatggct 120  
aacttaattc agaaagagcg ccagagtttt tcttaaccaa aagaggtaat gatatttttc 180  
agtgccccatg gtgtacctgt caagtacgtt gagggagctg gggatccata ccgagaccaa 240  
atggaggagt gca 253

<210> 381  
<211> 269  
<212> DNA  
<213> Glycine max  
<400> 381

ttcttgagca tatattcagg gaagatgcct acttgtctaa gctccctgtt tccattataa 60  
actcttggtg tcaacgagaa gggtatatta agtcaatggc taacttaatt cagaaagagc 120  
tccagagttt ttctgaacca aaagaggtaa tgatattttt cagtgcccat ggtgtacctg 180  
tcagttacgt tgaggaagct ggggatccat accgagacca aatggaggag tgcattctct 240

tgatcatgca agagttgaaa gctagagga 269

<210> 382  
<211> 251  
<212> DNA  
<213> Glycine max

<400> 382

aagagctcca gagtttttct gaaccaaaag aggtaatgat atttttcagt gcccatggtg 60  
tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaag gaggagtgc 120  
tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac actcttgctt 180  
atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa gttctcggtg 240  
agcttggcca a 251

<210> 383  
<211> 275  
<212> DNA  
<213> Glycine max

<400> 383

ttaattcaga aagagctcca gagtttttct gaaccaaaag aggtaatgat atttttcagt 60  
gcccatggtg tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaag 120  
gaggagtgc tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac 180  
actcttgctt atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa 240  
gttctcggtg agcttggcca aaaaggtgtg aagag 275

<210> 384  
<211> 168  
<212> DNA  
<213> Zea mays

<400> 384

ctttcttaca tatattcagc accacctctc aagctcgagc agaatggatg gattgggaac 60  
ttcgtcttgg gtgcgagtta catcagcttg ccttgggtgg ctggccaggc gttatttgga 120  
actcttacac cagatatcag tgtcttgact actttgtaca gcatagct 168

<210> 385

<211> 256  
 <212> DNA  
 <213> Zea mays

<400> 385

attgaagggg ataggactct ggggcttcag tcacttcctg ttgcttttgg gatggaaact 60  
 gcaaaatgga tttgtgttgg agcaattgat atcactcaat tatctgttgc aggttaccta 120  
 ttgagcaccg gtaagctgta ttatgccctg gtgttgcttg ggctaacaat tcctcagggtg 180  
 ttcttttcagt tccagtactt cctgaaggac cctgtgaagt atgatgtcaa atatcaggca 240  
 agcgcacaaac cattct 256

<210> 386  
 <211> 411  
 <212> DNA  
 <213> Zea mays

<400> 386

cccacgcgtc cgcccacgcg tccgcccacg cgtccgccc cgcgtccgag cacacacggg 60  
 cgcacacggg cctagctcga gtccactact tgaaaaacag gaaaaagggt gcgtttgagg 120  
 agatgacgaa gctcgtggag atagccagcc actgcgcgtc ggcatatgaa aagcgggtcgg 180  
 aatacgggtga ggcggaagct gcgaggagcg acctgaacat ggcgacgctt cttgatccta 240  
 ccaggactta tccttacaga tacagagcag ctgtactgat ggacgaaggc aaggaggagg 300  
 aggcgatcgc ggagctgtca ggagccatag ctttcaagcc ggaccttcag ctgctgcacc 360  
 ttcgcgcggc gttcttcgac tccatgggcg agcgcgagag cgccctgtgg g 411

<210> 387  
 <211> 484  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 387

ntgggggttnn ctagagggga ggggggcaat tgatggaagt cttcaattcc gtttcgnacc 60  
 nccccgccc acgcgtccgc cgacgccaaa aacgcgaagg cgaacgcat ggccccgaat 120  
 aagagcaccg gcggcggatg actccagttt caaccagctg ctcggtatca aaagtgccta 180  
 gccagggaac ggccttttgg aaaatccgcc ttaacttaac taagccggtg acatggcctc 240

cgcttggttg gggagttctc tgtggagcag ctgcctctgg aaatttccac tggacagttg 300  
aagatgtcgc aaaatctatt gtatgcatga taatgtctgg tccatgcctt acaggatata 360  
cacagacact taatgactgg tatgatcgag acattgatgc aattaatgag ccttatcggc 420  
ctattccatc aggtgctata tcaganaacg aggtaataac ccagatctgg gtgctattgc 480  
tagg 484

<210> 388  
<211> 301  
<212> DNA  
<213> Zea mays

<400> 388  
ccaaggcccc gaataacgca cccgcggcgg atggctccag tttcaaccag ctgctcggta 60  
tcaaggggtgc taagcaagac agcgacatgt ggcagatgcg tcttcaactt actaagccgg 120  
tgacatggcc tccgcttggt tggggagttc tctgtggagc agctgcctct ggaaatttcc 180  
agtggacagt tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc 240  
ttacaggata cgcacagaca cttaatgact ggtatgatcg agacattgat gcaattagtg 300  
a 301

<210> 389  
<211> 284  
<212> DNA  
<213> Zea mays

<400> 389  
tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc ttacaggata 60  
cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 120  
gcctattcca tcaggtgcta tatcagaaaa cgaggtaata acccagatct ggggtgctatt 180  
gctaggaggg cttggattgg gtgctttggt agatgtgtgg gcaggacatg attttcctat 240  
tgtgttttat cttgctgtgg gtggctcctt actttcttac atat 284

<210> 390  
<211> 256  
<212> DNA  
<213> Zea mays

<400> 390

caattaatga gccttatcgg cctattccat cagggtgctat atcagaaaac gaggtaataa 60

cccagatctg ggtgctattg ctaggagggc ttggattggg tgctttgtta gatgtgtggg 120

caggacatga ttttcctatt gtgttttata ttgctgtggg tggctcccta ctttcctaca 180

tatattcagc accacctctc aagctccagc agaatggatg gaatgggaac ttcgctctgg 240

gtgcgagtta catcag 256

<210> 391

<211> 318

<212> DNA

<213> Zea mays

<400> 391

gcatgataat gtctgggtcca tgccttacag gatacacaca gacacttaat gactgggtatg 60

atcgagacat tgatgcaatt aatgagcctt atcggcctat tccatcaggt gctatatcag 120

aaaacgaggt aataaccag atctgggtgc tattgctagg agggcttgga ttgggtgctt 180

tgttagatgt gtgggcagga catgatcttc ctattgtgtt ttatcttgct gtgggtggct 240

ccttactttc ttacatatat tcagcaccac ctctcaagct caagcagaat ggatggattg 300

ggaacttcgc tctgggtg 318

<210> 392

<211> 272

<212> DNA

<213> Zea mays

<400> 392

ctgggtgtaag agttccaaat aacgcctggc cagcccacca gggcaagatg atgtaactct 60

aaccagagc gaagttccca atccatccat tctgcttgag cttgagaggt ggtgctgaat 120

atatgtaaga aagtaaggag ccaccacag caagataaaa cacaatagga aaatcatgtc 180

ctgcccacac atctaacaaa gcaccaate caagccctcc tagcaatagc accagatct 240

gggttattac ctcgttttct gatatagcac ct 272

<210> 393

<211> 288

<212> DNA  
 <213> Zea mays  
 <400> 393  
 cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 60  
 gcctattcca tcaggtgcta tatcagaaaa cgaggtaata acccagatct ggggtgctatt 120  
 gctaggagggg cttggattgg gtgctttggt agatgtgtgg gcaggacatg attttcctat 180  
 tgtgttttat cttgctgtgg gtggctcctt actttcttac atatattcag caccacctct 240  
 caagctcaag cagaatggat ggattgggaa cttcgctctg ggtgcgag 288

<210> 394  
 <211> 256  
 <212> DNA  
 <213> Zea mays  
 <400> 394  
 caattcctca ggtgttcttt cagttccagt acttcctgaa ggaccctgtg aagtatgatg 60  
 tcaaatatca ggcaagcgca caaccattct tcgtactggg cctactgggtg acagcactgg 120  
 caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccaaga 180  
 ggcacgtctg gtgaccatta ataagctagc tgcttgtgtg cagggtagga agagaacgtc 240  
 tttttacttg tagaac 256

<210> 395  
 <211> 280  
 <212> DNA  
 <213> Zea mays  
 <400> 395  
 caattcctca ggtgttcttt cagttccagt acttcctgaa ggaccctgtg aagtatgatg 60  
 tcaaatatca ggcaagcgca caaccattct tcgtactggg cctactgggtg acagcactgg 120  
 caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccaaga 180  
 ggcacgtctg gtgaccatta ataagctagc tgcttgtgtg cagggtagga agagaacgtc 240  
 tttttacttg tagaacacag atcgattttg taagggttat 280

<210> 396  
 <211> 287



<212> DNA  
 <213> Zea mays  
 <400> 396  
 cccacgcgtc cgtattcagc accacctctc aagctcaagc agaatggatg gattgggaac 60  
 ttcgctctgg gtgcgagtta catcagcttg ccctggtggg ctggccaggc gttatttgga 120  
 actcttacac cagatatcat tgtcttgact actttgtaca gcatagctgg gctagggatt 180  
 gctattgtaa atgatttcaa gagtattgaa ggggatagga ctctggggct tcagtcactt 240  
 cctgttgctt ttgggatgga aactgcaaaa tggatttgtg ttggagc 287

<210> 397  
 <211> 152  
 <212> DNA  
 <213> Zea mays  
 <400> 397  
 cagcaccacc tctcaagctc aagcagaatg gatggattgg gaacttcgct ctgagtgcga 60  
 gttacatcag cttgccctgg tgggctggcc aggcgttatt tggaactctt acaccagata 120  
 tcattgtcta gactacttcg tacagcatag ct 152

<210> 398  
 <211> 298  
 <212> DNA  
 <213> Zea mays  
 <400> 398  
 agggcttcgt gtcggaggcg gagtccggca agaggctggc gcaggtggc agcgacccca 60  
 gcctcaccaa gtcgggggtg tactggagct ggaacaagga ctcggcgtcg ttcgagaacc 120  
 agctgtcgca ggaggccagc gatccggaga aggccaaagaa gctctgggag atcagcgaga 180  
 agctcgtggg gcttccttga gctccccgca caggaaaaag cgacatgatg aatctgtcga 240  
 gcagaggagc tttecgcttcg ttgtattatg tgtaacatta gcatccattt gtttgttt 298

<210> 399  
 <211> 218  
 <212> DNA  
 <213> Zea mays  
 <400> 399

ggggagttcg acggcgccaa ggcatacaag gacagcaagg tgtgcaacat gctgacgatg 60  
 caggagttcc accgccggta ccacgaggag acgggcgtga ccttcgcgtc gctctaccgc 120  
 ggctgcatcg ccaccagggg cctgttccgc gaacaaattc cgctgttccg gctgtgctcc 180  
 gcccgccgtt ccagaagtac atcaccaggg tacgtctc 218

<210> 400  
 <211> 317  
 <212> DNA  
 <213> Zea mays

<400> 400  
 gtcacttctc cacgaacaaa agcgcacga tctcgtgtc gtcactctc gtcacccagc 60  
 cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctactccca tacaccctct 120  
 catccgtccc caagaagtgc agcctcgccg tcgcgggcgaa tgacacggca ttccttagcg 180  
 taccctacaa gaaggtgcac gcggcgctac tgtccgtgaa aacgcggtgg cgactaccgc 240  
 gcctgtggcc acgccggggg ccagcacggc ggtcaacgat gggaagaaga ccgtgcggca 300  
 tgccgtggtg gtgatca 317

<210> 401  
 <211> 172  
 <212> DNA  
 <213> Zea mays

<400> 401  
 gcagaagtcc gactaccggt cccggcggct tatcatctc ggggtccatca ccggcaacag 60  
 caacacgctg gccgggaaca tcccgcccaa ggccgggctg ggcgaccttc gcgggctcgc 120  
 ggccggggctg cgcggccaga acggctctgc catgatcgac ggcttcgaga gc 172

<210> 402  
 <211> 313  
 <212> DNA  
 <213> Zea mays

<400> 402  
 aaatcctcag tcctcagggt gtcacagtt cgtgctatcc gctcgcgtc ccggtagtct 60  
 gcctgctcgg caattcggca tggcgctcca ggccgcgaag tcttctctcc cctcggccct 120

ctcggcgcgcg aaggaggggt cgtcgggtgaa ggactcggcg ttcttgggtg tccatctcgc 180  
ggacgatggc ctcaagctgg agaccgctgc tctgggccta cgcaccaaga gggatgatcac 240  
gtcgggtggcc atccgcgcgc aggcggcagc ggtgtcctca ccatcagtat accccgcgtc 300  
gccgtccggc aag 313

<210> 403  
<211> 252  
<212> DNA  
<213> Zea mays

<400> 403

cccagccaaa tctcagtc ttaggctgct cacagttcgt gctatccgct cgcgctcccg 60  
gtagtctgcc tgctcggcaa ttcggcatgg cgctccaggc cgcgacgtcc ttcttcccct 120  
caggccctct gcggcgcgca aggtaggggt cgtcgggtgaa ggactcggcg ttcttgggtg 180  
tccatctcgc ggacgatggc ctcaagctgg agaccgctgc tatgggccta cgcaccaaga 240  
gggtgatcac gt 252

<210> 404  
<211> 399  
<212> DNA  
<213> Zea mays

<400> 404

accacgcgtc cgcatacaag gacagcaagg tgtgcaacat gctgacgatg caggagtcc 60  
accgccggta ccacgaggag acgggcgtga ccttcgcgtc gctctacccg ggctgcatcg 120  
ccaccacggg cctgttccgc gagcacatcc cgctgttccg cctgctcttc ccgccgttcc 180  
agaagtacat caccaagggg tacgtctccg aggaggaggc cgggaagcgg ctggcgcagg 240  
tggtgagcga cccagcctg accaagtccg gcgtgtactg gagctggaac aagaactccg 300  
cgtccttcga gaaccagctc tctgaggagg ccagcgacgc cgacaaggcc aagaagctct 360  
gggagatcag cgagaagctc gtcggcttgg cgtgatgcc 399

<210> 405  
<211> 442  
<212> DNA  
<213> Zea mays

<223>        unsure at all n locations  
 <400>        405

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gagcttcgac ggcgccaagg cgtacaagga cagcaagatc tgcaacatgc taacaatgca  180
ggagctgcac cggcggtacc acgaggagac gggcatcacg ttgcgctcgc tctaccggg  240
gtgcatcgcc accacggggc tgttcgcga gcacatcccg ctgttcggc tgctcttccc  300
gccgttcag aagttcgtca ccaaaggctt cgtgtcggaa gcggagtccg gcaagaagct  360
ggcgcgatgtg gtcagcgacc ccagcctcac caagtccgng gtgtactgga gctggaacaa  420
ggactccgcg tcgttcgaga ac                                     442
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<210>        406  
 <211>        442  
 <212>        DNA  
 <213>        Zea mays

<400>        406

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gacctccgcg gcctcgcggc ggggctgcgc ggccagaacg gctctgcat gatcgacggc  120
tccgagagct tcgacggcgc caaggcgta aaggacagca agatctgcaa catgctcacc  180
atgcaggagc tgcaccggcg gtaccacgag gagacgggca tcacgttcgc gtcgctctac  240
ccgggggtgca tcgccaccac ggggctgttc cgcgagcaca tcccgctgtt ccgcctgctc  300
ttcccgcctt tccagaagtt cgtcaccaag ggcttcgtgt cggaggcgga gtccggcaag  360
aggctggcgc atgtggtcag cgaccccagc cttaccaaag tcgggggtgta ctggagctgg  420
aacaggggac tcgcgtcggt cg                                     442
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<210>        407  
 <211>        352  
 <212>        DNA  
 <213>        Zea mays

<400>        407

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atcatcctcg gctccatcac cggcaacacc aacacgctgg ccgggaacat cccgcccaag 120  
gccgggctgg gcgacctgcg cggcctcgcg gcggggctgc gcggccagaa cggctctgcc 180  
atgatcgacg gctccgagag cttcgacggc gccaaggcgt acaaggacag caagatctgc 240  
aacatgctca ccatgcagga gctgcaccgg cgggtaccacg aggagacggg catcacgttc 300  
gcgtcgctct acccgggggtg catcgccacc acggcgctgt tccgcgagca ca 352

<210> 408  
<211> 277  
<212> DNA  
<213> Zea mays

<400> 408

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ctgcgcggcc agaacggctc tgccatgacg gacggctccg agagcttcga cggcgccaag 120  
gcgtacaagg acagcaagat ctgcaacatg ctaacaatgc aggagctgca ccggcggtac 180  
cacgaggaga cgggcatcac gttcgcgtcg ctctaccggg ggtgcatcgc caccacgggg 240  
ctgttccgcg agcacatccc gctgttccgg ctgctct 277

<210> 409  
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<212> DNA  
<213> Zea mays

<400> 409

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caccgcccgt accacgagga gacgggctg accttcgcgt cgctctaccc gggctgcatc 120  
gccaccacgg gcctgttccg cgagcacatc ccgctgttcc gcctgctctt cccgccgttc 180  
cagaagtaca tcaccaaggg gtacgtctcc gaggaggagg ccgggaagcg gctggcgag 240  
gtggtgagcg accccagcct gaccaagtcc gg 272

<210> 410  
<211> 309  
<212> DNA  
<213> Zea mays

<400> 410

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 aggcgtacaa ggacagcaag atctgcaaca tgctcaccat gcaggagctg caccggcggt 180  
 accacgagga gacggggcatc acgttcgcgt cgctctaccc ggggtgcatc gccaccacgg 240  
 ggctgttccg cgagcacatc ccgctgttcc gcctgtcttt cccgccgttc cagaagtctg 300  
 tcaccaagg 309

<210> 411  
 <211> 264  
 <212> DNA  
 <213> Zea mays

<400> 411  
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 gacagcaaga tctgcaacat gctcaccatg caggagctgc accggcggtta ccacgaggag 120  
 acgggcatca cgttcgcgtc gctctacccg ggggtgcatc ccaccacggg gctgttccgc 180  
 gagcacatcc cgctgttccg cctgtctctc ccgcctttcc agaagtctgt caccaagggc 240  
 ttcgtgtcgg aggcggagtc cggc 264

<210> 412  
 <211> 267  
 <212> DNA  
 <213> Zea mays

<400> 412  
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 ccttcggggtc gctctacccg ggctgaatgg caacaacggg cctgttccgg gaacacatcc 180  
 cgctgttccg gctgctcttc ccgccgttcc agaagtacat caccaagggg gtacgtctcc 240  
 gaggaggagg ccgggaagcg ctggcgc 267

<210> 413  
 <211> 302  
 <212> DNA  
 <213> Zea mays

<400> 413

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ccacgaggag acgggcatca cgttcgcgtc gctctacccg ggggtgcatcg ccaccacggg 120  
gctgttccgc gagcacatcc cgctgttccg cctgctcttc ccgccgttcc agaagtctgt 180  
caccaagggc ttcgttccga agcgggaaccg gcaagaagct tgcgcagggtg gtcagcgacc 240  
ccagcctcac caagtcgggg gtgtactgga gctggaacaa ggactcggcg tcgttcgaga 300  
ac 302

<210> 414

<211> 291

<212> DNA

<213> Zea mays

<400> 414

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cctcggctcc atcacggga acaccaacac gctggccggg aacatccgc ccaaggccgg 120  
gctgggcgac ctccgcagcc tcgggcgggg ctgcgcggcc agaacggctc tgccatgac 180  
gacggctccg agagcttca cggcgccaag gcgtacaagg acagcaagat ctgcaacatg 240  
ctaacaatgc aggagctgca ccggcggtac cacgaggaga cgggcatcac g 291

<210> 415

<211> 268

<212> DNA

<213> Zea mays

<400> 415

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gtacgtctcc gaggaggagg ccgggaagcg gctggcgag gtggtgagcg accccagcct 120  
gaccaagtcc ggcgtgtact ggagctggaa caagaactcc gcgtccttcg agaaccagct 180  
ctctgaggag gccagctgac gcgacaaggc caagaagctc tgggagatcc gcgagaagct 240  
cgtcggcttg gcgtgatgcc caccgtgc 268

<210> 416

<211> 296

<212> DNA

<213> Zea mays  
 <400> 416  
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 cgcgggcctcg ggcggggctg cgcgggcaga acggctctgc caggatcgac gggtccgaga 120  
 gcttcgacgg cgccaaggcg tacaaggaca gcaagatctg caacatgctc accatgcagg 180  
 agctgcaccg gcggtaccac gaggagacgg gcatcacgtt cgcgtcgctc taccgggggt 240  
 gcatcgccac cacggggctg ttccgcgagc acatcccgtt gtccgcctg ctcttc 296

<210> 417  
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 <212> DNA  
 <213> Zea mays  
 <400> 417  
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 ccgggaagcg gctgtcgcag gtcgtgagcg accccagcct gaccaagtcc ggcgtgtact 120  
 ggagctggaa caagaactcg gcgtccttcg agaaccagct ctctgaggag gccagcgacg 180  
 ccgacaaggc caagaagctc tgggagatca gcgagaagct cgtcagcttg gcgtgacgac 240  
 ctgatgtcca cagtg 255

<210> 418  
 <211> 326  
 <212> DNA  
 <213> Zea mays  
 <400> 418  
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 ggccgggaag cggtggcgc aggtggtgag cgacccagc ctgaccaagt ccggcgtgta 120  
 ctggagctgg aacaagaact ccgcgtcctt cgagaaccag ctctctgagg aggccagcga 180  
 cgccgacaag gccaagaagc tctgggagat cagcgagaag ctcgtcggct tggcgtgatg 240  
 cccaccgtgg ccggcgccgg cagccggcga cagtttttcc tacctaggac atgctcatta 300  
 gttggtctca gtcgagtagt cgacgt 326

<210> 419



<211> 290  
 <212> DNA  
 <213> Zea mays  
  
 <400> 419  
  
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 agtccggcgt gtactggagc tggaacaaga actcggcgtc ctctgagaac cagctctctg 120  
 aggaggccag cgacgccgac aaggccaaga agctctggga gatcagcgag aagctcgtcg 180  
 gcttggcgtg acgacctgat gcccaccgtg gccggcgccg gcagccggtg acagtttttt 240  
 cctaggacat gttcgttact tgatctcagt cgacgcgtgg tgcactcgtg 290

<210> 420  
 <211> 217  
 <212> DNA  
 <213> Zea mays  
  
 <400> 420  
  
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 tccgactacc cgccccgcg cctcgtcctc ctccggtcca tcaccggcaa caccaacacg 120  
 ctggccggga acatcccgcc caaggccggg ctggggcgacc tccgcggcct cgccggcgggg 180  
 ctgcgcgggc agaacggctc tgccatgac gacggct 217

<210> 421  
 <211> 242  
 <212> DNA  
 <213> Zea mays  
  
 <400> 421  
  
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 cggcgtgtac tggagctgga acaagaactc cgcgctctac gagaaccagc tctctgagga 120  
 ggccagcgac gccgacaagg ccaagaagct ctgggagatc agcgagaagc tcgtcggctt 180  
 ggcgtgatgc ccaccgtggc cggcgccggc agccggcgac agtttttctt acctaggaca 240  
 tg 242

<210> 422  
 <211> 116  
 <212> DNA

<213> Zea mays  
 <400> 422  
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 accacggggc tgttccgcga gcacatcccg ctgttccgcc tgcctcttccc gccggt 116  
  
 <210> 423  
 <211> 133  
 <212> DNA  
 <213> Zea mays  
 <400> 423  
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 cgacgcctcg cggcgggggt gcacggccat aacggctctg ccatgatcga cggctccgag 120  
 agcttcgacg gcg 133  
  
 <210> 424  
 <211> 364  
 <212> DNA  
 <213> Zea mays  
 <400> 424  
 cgcaagggca cggcgggtcat caccggcgcg tcgtccggcc tcggcctcgc cacggcgaag 60  
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 tcgcgcgcgg ccaaggcggc cggcatggac aaggacagct tcaccgtcgt gcacctggac 180  
 ctgcctccc tggacagcgt ccgccagttc gtcaagaacg tgcgccagct ggagatgccc 240  
 atcgacgtgg tggctctgcaa cgcgctcgtg taccagccca ccgccaagga gccgtcctac 300  
 accgcgcgacg gcttcgagat gagcgtcggc gtcaaccaac ctggccactt tctcctcgcg 360  
 cgcg 364  
  
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 <213> Zea mays  
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gatgcccatac gacgtggtgg tctgcaacgc cgccgtgtac cagcccaccg ccaaggagcc 120  
 gtcctacacc gccgacggct tcgagatgag cgtcggcgtc aaccacctcg gccacttcct 180  
 cctcgcgcgc gagctcctca ggcacctcca gtctccgac taccctctta agcgctcat 240  
 catcgtcggc tccatcacgc ggaacacgta cacgctggcg gggaacgtg 289

<210> 426  
 <211> 331  
 <212> DNA  
 <213> Zea mays

<400> 426

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 gccaaagcag ccggcatgga caaggacagc ttcaccgtcg tgcacctgga cctcgctctc 120  
 ctcgacagcg tccgccagtt cgtcaagaac gtgcccagc tggagatgcc cgtcgacgtg 180  
 gtggtctgca acgcccgggt gtaccagccc accgccaagg agccgtccta caccgccgac 240  
 ggcttcgaga tgagcgtcgg cgtcaaacac ctccggccact tctcctcgc ccgcgagctc 300  
 ctcagcgacc tccagtcctc cgactatccc t 331

<210> 427  
 <211> 280  
 <212> DNA  
 <213> Zea mays

<400> 427

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 gacggcttcg agatgagcgt cggcgtaac cacctcggcc atttcctcct cgcccgcgag 120  
 ctctcagcg acctccagtc ctccgactac ccctctaagc gcctcatcat cgtcggctcc 180  
 atcaccggga acacgaacac gctggcgggg aacgtgcccc cgaactcgaa cctgggcgac 240  
 ctgcgcggcc tcgcccggcg cctcaacggc gttggcagct 280

<210> 428  
 <211> 285  
 <212> DNA  
 <213> Zea mays

<400> 428

gagcgtcggc gtcaaccacc tcggccattt cctcctcgcc cgcgagctcc tcagcgacct 60  
ccagtccctc gactaccctt ctaagcgctt catcatcgtc ggctccatca ccgggaacac 120  
gaacacgctg gcggggaacg tgccccgaa ggcgaaacctg ggcgacctgc gcggcctcgc 180  
cggcggcctc aacggcggtg gcagctcggg gatgatcgac ggcggggagt tcgacggcgc 240  
caaggcatatc aaggacagca aggtgtgcaa catgctgacg atgca 285

<210> 429  
<211> 282  
<212> DNA  
<213> Zea mays

<400> 429

cccacgcgtc cgcaccggcg cgtcgtccgg cctcggcctc gccacggcga aggccctcgc 60  
ggagacaggc aagtggcacg tcatcatggc ctgccgcgac ttctcaagg cgtcgcgcgc 120  
ggccaaggcg gccggcatgg acaaggacag cttcaccgtc gtgcacctgg acctcgcctc 180  
cctggacagc gtccgccagt tcgtcaggaa cgtgcgccag ctggagatgc ccatcgacgt 240  
ggtggtctgc aacgccgcgc tgtaccagcc caccgccaag ga 282

<210> 430  
<211> 276  
<212> DNA  
<213> Zea mays

<400> 430

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acgccgccgt gtaccagccc accgccaagg agccgtccta caccgccgac ggcttcgaga 120  
tgagcgtcgg cgtcaaccac ctcggccatt tcctcctcgc ccgcgagctc ctcagcgacc 180  
tcagctcctc cgactacccc tctaagcgcc tcatcatcgt cggctccatc accgggaaca 240  
cgaacacgct ggcggggaac gtgccccgac agcgaa 276

<210> 431  
<211> 229  
<212> DNA  
<213> Zea mays

<400> 431

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ctccccgtca gtgacccccg cgtcgccgtc tggcaagaag accctccgca agggcacggc 120  
ggtcatcacc ggcgcgctcg cgggcctcgg cctcgccacg gcgaaggccc tcgcgagagac 180  
aggcaagtgg cacgtcatca tggcctgccg cgacttctca aggcgtcgc 229

<210> 432  
<211> 394  
<212> DNA  
<213> Zea mays

<400> 432

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ccccgaggc attctcttgc gtctcgtgct cgacatggcg ctccaggcgg cgacgtcctt 120  
cctccccctc gccctctccg cgcgcaagga ggggtcgggtg aaggactcgg cgtcgttctt 180  
gggtgttcgt ctcgcgggcg atgggctcaa gctggacacc accgctctgg gcctacgcac 240  
cgtgaggggtg agcaggtcgg cggacatccg cgcgcagacg gcagcgggtgt cctccccgtc 300  
agtgaccctt gcgtcgccgt ctggcaagaa gaccctccgc attggcacgg cggtcatcat 360  
cggcgcgctcg tccggcctcg gcctcgccac ggcg 394

<210> 433  
<211> 275  
<212> DNA  
<213> Zea mays

<400> 433

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aggggtgagca ggtcggcgga catccgcgcg cagacggcag cgggtgcctc cccgtcagtg 120  
acccccgcgt cgccgtcttg caagaagacc ctccgcaagg gcacggcggg catcaccggc 180  
gcgtcgtccg gcctcggcct cgccacggcg aaggccctcg cggagacagg caagtggcac 240  
gtcatcatgg cctgccgcga cttcctcaag gcgtc 275

<210> 434  
<211> 418  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
 <400> 434

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 tccactctcc cccgaggcag tctcttgctg tcgctgctcg acatggcgct ccaggcgggc 120  
 acgtcctttc tcccctcggc cctctccgcg cgcaaggagg ggtcgggtgaa ggactcggcg 180  
 tcgttcttgg gtgttcgtct cgcggcgcat ggctcaagc tggacaccac cgctctgggc 240  
 ctacgcaccg tgaggggtgag caggtcggcg gacatccgcg cgcagacggc agcgggtgtcc 300  
 tcnccgtcag tgacncccg cgtcccgtct ggcaanaaga cctccgnaag ggnaangggc 360  
 gtcatnaacg gggggctngn tagggcncng gggnnncnna gggngaaggg ngccnct 418

<210> 435  
 <211> 321  
 <212> DNA  
 <213> Zea mays

<400> 435  
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 gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttt ctcccctcgg 120  
 cctctccgc gcgcaaggag gggtcgggtga aggactcggc gtcgttcttg ggtgttcgctc 180  
 tcgcggcgga tggcctcaag ctggacacca ccgctctggg cctacgcacc gtgaggggtga 240  
 gcaggtcggc ggacatccgc gcgcagacgg cagcgggtgtc ctccccgtca gtgacccccg 300  
 gatcgcgtct ggcaagaaga c 321

<210> 436  
 <211> 112  
 <212> DNA  
 <213> Zea mays

<400> 436  
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 atcgtcagct ccatcaccgg gaacacgaac acgctggcgg ggaacgtgcc cc 112

<210> 437  
 <211> 296  
 <212> DNA  
 <213> Zea mays

<400> 437

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agtcttcagg ctgtcacag ctctgtccgt ccactctccc ccgaggcagt ctcttgcggt 120  
cgctgctcga catggcgctc caggcggcga cgtcctttct cccctcggcc ctctccgcgc 180  
gcaaggaggg gtcggtgaag gactcggcgt cgttcttggg tgttcgtctc gcggcggatg 240  
gcctcaagct ggacaccacc gctctgggcc tacgcaccgt gagggtgagc aggtcg 296

<210> 438

<211> 175

<212> DNA

<213> Zea mays

<400> 438

cgacatggcg ctccaggcgg cgacgtcctt tctccctctg gccctctccg cgcgcaagga 60  
ggggtcgggtg aaggactcgg cgtcgttctt ggggtgttcgt ctgcggcggg atggcctcaa 120  
gctggacacc accgctctgg gcctacgcac cgtggagggtg agcaggtcag cggac 175

<210> 439

<211> 301

<212> DNA

<213> Zea mays

<400> 439

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ccccgagcca gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttc 120  
ctccctctctg cctctctccg gcgcaaggag ggggtcgggtga aggactcggc gtcgttcttg 180  
gggtgttcgtc tcgcggcgga tggcctcaag ctggacacca ccgctctggg cctacgcacc 240  
gtgaggggtga gcaggtcggc ggacatccgc gcgcagacgg cagcgggtgtc ctccccgtca 300  
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<210> 440

<211> 261

<212> DNA

<213> Zea mays

<400> 440

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accaccgctc tgggcctacg caccgtgagg gtgagcaggt cggcggacat ccgcgcgag 120  
acggcagcgg tgtcctcccc gtcagtgacc cccgcgtcgc cgtctggcaa gaagaccctc 180  
cgcataggca cggcgggtcat caccggcgcg tcgtccggcc tcggcctcgg cacggcgaag 240  
gccctcgcg agacaggcaa g 261

<210> 441  
<211> 84  
<212> DNA  
<213> Zea mays

<400> 441

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catggcctgc cgcgacttcc tcaa 84

<210> 442  
<211> 352  
<212> DNA  
<213> Zea mays

<400> 442

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gggtccagca cggcggccaa ggatgggaag aagaccgtgc ggcagggcgt ggtggtgatc 120  
acgggcgcgt cgtcgggggtt gggcctggcg gcgcccaagg cgctggcgga gaccggcaag 180  
tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 240  
ggcatggcgg acggcagcta caccatcatg cacctggacc tggccttcct cgacagcgtg 300  
cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cg 352

<210> 443  
<211> 279  
<212> DNA  
<213> Zea mays

<400> 443

acgggcgcgt cgtcgggggtt gggcctggcg gcgcccaagg cgctggcgga gaccggcaag 60  
tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 120



ggcatggcgg acggcagcta caccatcatg cacctggacc tggcctccct cgacagcgtg 180  
 cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cgtctgcaac 240  
 gccgccatct accggcccac ggcatagacg ccgacgttc 279

<210> 444  
 <211> 221  
 <212> DNA  
 <213> Zea mays

<400> 444

aaagcgcata gatctcgctg tcgtcactcc tcgtcaccca gccaaaggcgc tggcggagac 60  
 cggcaagtgg cacgtggtga tggcctgccg cgacttcttc aaggcggcca aggcggccaa 120  
 gggcgccggc atggcggacg gcagctacac catcatgcac ctggacctgg cctccctcga 180  
 cagcgtgcgg cagttcgtgg acagcttccg gcgcgccggc a 221

<210> 445  
 <211> 310  
 <212> DNA  
 <213> Zea mays

<400> 445

agtgcagcct cgccgtcgcg gcgaaggaca cggcattcct tagcgtatcc cagaagaagg 60  
 tgcaggcggc gtcgctgtcg gtgagaacgc ggggtggcgac gacggcgcct gtggccacgc 120  
 cgggggtccag cacggcggcc aaggatggga agaagaccgt gcggcagggc gtggtggtga 180  
 tcacgggcgc gtcgtcgggg ttgggcctgg cggcggccaa ggcgctggcg gagaccggca 240  
 agtggcacgt ggtgatggcc tgccgcgact tcctcaaggc ggccaatgcg gccaaagggc 300  
 ccggcatggc 310

<210> 446  
 <211> 295  
 <212> DNA  
 <213> Zea mays

<400> 446

cccacgcgtc cgcggcgaag gacacggcat tccttagcgt atcccagaag aaggtgcagg 60  
 cggcgtcgct gtcggtgaga acgcgggtgg cgacgacggc gcctgtcgcc acgccggggt 120

ccagcacggc ggccaaggat gggaagaaga cegtgcggca gggcgtggtg gtgatcacgg 180  
gcgcgtcgtc ggggttgggc ctggcggcgg ccaaggcgct ggcggagacc ggcaagtggc 240  
acgtggtgat ggctgccgc gacttctca aggcggccaa ggcggccaag ggcgc 295

<210> 447  
<211> 444  
<212> DNA  
<213> Zea mays

<400> 447

cggacgcgtg ggcgaacaaa agcgcacga tctcgtgtc gtcactctc gtcacccagg 60  
cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gtcctctca tccacctct 120  
catccgtccc caagaagtgc agcctcgccg tcgcggcgaa ggacacggca ttccttagcg 180  
tatcccagaa ggtcagtgat cagctgcac tgcagtgtc actcgagtc acaatgcgct 240  
tgaattgaac gtgtcactca ctctgtcgtg agcatgccat gcgtgcagaa ggtgcaggcg 300  
gcgtcgtgtg cggtagagat cacttcgcca tctaccggcc cacggcaagg acgccgacgt 360  
tcacggcgga cggatacgag atgagcgtcg gcgtcaacca cctgggccac ttcctcctgg 420  
cgcgcctgct cctggacgac atgc 444

<210> 448  
<211> 423  
<212> DNA  
<213> Zea mays

<400> 448

cccacgcgtc cgcccacgcg tccgcggact cgtgggcttc gccacgaaca aaagcgcac 60  
gatctcgtg tcgtcactcc tcgtcaccca gccacgaaca gaggcaccac ccagcatggc 120  
cctgcaggcg gcgtcctcc catccacct ctcacccgtc cccaagaagt gcagcctcgc 180  
cgtcgcggcg aaggacacgg cattccttag cgtatcccag aagaagggtg aggcggcgtc 240  
gctgtcgggtg agaacgcggg tggcgacgac ggcgcctgtg gccacgccgg ggtccagcac 300  
ggcggccaag gatgggaaga agaccgtgcg gcaggcggtg gtggtgatca cgggcgcgtc 360  
gtcgggggtg ggctggcg cggccaaggc gctggcgag accggcaagt ggcacgtggt 420  
gat 423

<210> 449  
 <211> 279  
 <212> DNA  
 <213> Zea mays

<400> 449

cgctgtcgtc actcctcgtc acccagccac gaacagaggc accaccagc atggccctgc 60  
 aggcggcgct cctcccatcc accctctcat ccgtcccca gaagtgcagc ctgcgcgtcg 120  
 cggcgaagga caccggcattc cttagcgtat ccacgggcgc ggacgccgac gttcacggcg 180  
 gacgggtacg agatgagcgt cggcgtcaac cacctgggcc acttcctcct ggcgcgcctg 240  
 ctctggacg acatgcagaa gtccgactac acgtccgc 279

<210> 450  
 <211> 396  
 <212> DNA  
 <213> Zea mays

<400> 450

gacttcgcca cgaacaaaag cgcacgacg tcgctgtcgt cactcctcgt caccagcca 60  
 cgaacagagg caccaccag catggccctg caggcgggcgc tcctcccatc caccctctca 120  
 tccgtcccca agaagtgcag cctgcgcgtc gggcgaagg acacggcatt ccttagcgta 180  
 tcccagaaga aggtgcaggc ggcgtcgtc tcggtgagaa cgcgggtggc gacgacggcg 240  
 cctgtggcca cgccgggggc cagcacggcg gccaaaggatg ggaagaagac cgtgcggcag 300  
 ggcgtggtgg tgatcacggg cgcgtcgtcg ggggtgggcc tggcggcggc caaggcgtg 360  
 gcggagaccg gcaagtggca cgtggtgatg gcctgc 396

<210> 451  
 <211> 375  
 <212> DNA  
 <213> Zea mays

<400> 451

cagagtcact tcgccagaa caaatgcgca tcgatctcgc tgctgcact cctcgtcacc 60  
 cagccagaa cagaggcacc acccagcatg gccctgcagg cggcgtcctt cccatccacc 120  
 ctctcatccg tcccgaagaa gtgcagcctc gccgtcggc cgaaggacac ggcattcctt 180

agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240  
acggcgccctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300  
cggcagggcg tgggtggtgat cacgggcgcg tcgtcggggg tgggcctggc ggcggccaag 360  
gcgctggcgg agacc 375

<210> 452  
<211> 326  
<212> DNA  
<213> Zea mays

<400> 452

aacaaaagcg catcgatctc gctgtcgtca ctctcgtca cccagccacg aacagaggca 60  
ccaccacgca tggccctgca ggcggcgctc ctcccatcca ccctctcatc cgtccccaag 120  
aagtgcagcc tcgccgtcgc ggcgaaggat caggcattcc ttagcgtatc ccagaagaag 180  
gtgcagggcg cgtcgctgtc ggtgagaacg cgggttgcca cgacggcgcc tgttgccacg 240  
ccgggggtcca gcacggcggc caaggatggg aagaagaccg tgcggcaagg cgtggtggtg 300  
atcacgggcg cgtcgtcggg gttggg 326

<210> 453  
<211> 338  
<212> DNA  
<213> Zea mays

<400> 453

gagtcacttc gccacgaaca aaagcgcac gatctcgtg tcgtcactcc tcgtcaccca 60  
gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct 120  
ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180  
cgtatcccag aagaagggtg aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac 240  
ggcgccctgtg gccacgccgg ggtccagcac ggcggccaag gatgggaaga agaccgtgcg 300  
gcagggcggtg gtggtgatca ctggcgcgtc gtcggggg 338

<210> 454  
<211> 273  
<212> DNA  
<213> Zea mays

<400> 454

cttcgccacg aacaaaagcg catcgatctc gctgtcgtca ctctctgtca cccagccacg 60  
aacagaggca ccaccagca tggccctgca ggcggcgctc ctcccatcca ccctctcatc 120  
cgtccccaag aagtgcagcc tcgccgtcgc ggcgaaggac acggcattcc ttagcgtatc 180  
ccagaagaag gtgcaggcgg cgtcgtctgc ggtgagaacg cgggtggcga cgacggcgcc 240  
tgtggccacg ccgggggtcca gcacggcggc caa 273

<210> 455

<211> 296

<212> DNA

<213> Zea mays

<400> 455

gccacgaaca aaagcgcacg gatctcgctg tcgtcactcc tcgtcaccca gccacgaaca 60  
gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct ctcatccgtc 120  
cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag cgtatcccag 180  
aagaaggtgc aggcggcgctc gctgtcgggtg agaacgcggg tggcgacgac ggcgcctgtg 240  
gccacgccgg ggtccagcac ggcggccaag gatgggaaga agaccgtgcg gcaggg 296

<210> 456

<211> 314

<212> DNA

<213> Zea mays

<400> 456

cagagtcagt tcgccacgaa caaaagcgcg tcgatgtcgc tgtcgtcact cgtcgtcacc 60  
cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcggggtcg tcggatccac 120  
gctgtcatcc gtccccgaga agtgcagcct cgccgtcgcg gcgaagggtca cggcattcct 180  
tagcgtatcc cagaagaagg tgcaggcggc gtcgggtgtcg gtgagaacgc ggggtggcgac 240  
gacggcgccct gtggccacgc cgggggtccag cacagcggcc aaggatggga agaagaccgt 300  
gcggcagggc gtgg 314

<210> 457

<211> 287

<212> DNA  
 <213> Zea mays  
 <400> 457

gagtcacttc gccacgaaca aaagcgcac gatctcgtg tcgtcactcc tcgtcaccca 60  
 gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgtcctcc catccacct 120  
 ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180  
 cgtatcccag aagaagggtg aggcggcgtc gctgtcggg agaacgcggg tggcgacgac 240  
 ggcgctgtg gccacgccg ggtccagcac ggcgccaag gatggga 287

<210> 458  
 <211> 312  
 <212> DNA  
 <213> Zea mays  
 <400> 458

cagagtcact tcgccacgaa caaaagcgca tcgatctcgc tgctgtcact cctcgtcacc 60  
 cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120  
 ctctcatccg tccccaaaga gtgcagcctc gccgtcgcgg cgaaggacac ggcatcctt 180  
 agcgtatccc agaagaagggt gcaggcggcg tcgtgtcgg tgagaacgcg ggtggcgacg 240  
 acggcgcttg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300  
 cggcagggcg tg 312

<210> 459  
 <211> 321  
 <212> DNA  
 <213> Zea mays  
 <400> 459

gtcacttcgc cacgaacaaa agcgcacga tctcgtgtg gtcactcctc gtcacccagc 60  
 cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gtcctccca tccacctct 120  
 catccgtccc caagaagtgc agcctcgccg tcgcgcgaa ggacacggca ttccttagcg 180  
 tatcccagaa gaagggtgag gcggcgctgc tgtcggtag aacgcgggtg gcgacgacg 240  
 cgctgtggc cacgccggg tccagcacgg cggccaagga tgggaagaag accgtgcggc 300  
 agggcggtgt ggtgatcacg g 321

<210> 460  
 <211> 281  
 <212> DNA  
 <213> Zea mays

<400> 460

cttcgccacg aacaaaagcg cgtcgatctc gctgtcgtca ctctcgtca cccagccacg 60  
 aacagaggca ccaccagca tggccctgca ggcggcgctc ctcccatcca cctctctatc 120  
 cgtccccaag aagtgcagcc tcgccgtcgc ggccaaggac acggcattcc ttagcgtatc 180  
 ccagaagaag gtgcaggcgg cgtcgctgtc ggtgagaacg cgggtggcga cgacggcgcc 240  
 tgtggccacg cgggggtcca gcaggcggcc aaggatggga a 281

<210> 461  
 <211> 314  
 <212> DNA  
 <213> Zea mays

<400> 461

cagagtcact tcgccacgaa caaaagcgca tcgatctcgc tgctcgtcact cctcgtcacc 60  
 cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120  
 ctctcatccg tccccaagaa gtgcagcctc gccgtcgcgg cgaaggacac ggcatctcctt 180  
 agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240  
 acggcgccctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300  
 cggcatggcg tggt 314

<210> 462  
 <211> 351  
 <212> DNA  
 <213> Zea mays

<400> 462

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60  
 ctggagctgg aacaaggact cggcgctcgtt cgagaaccag ctgtcgcagg aggccagcga 120  
 tccggagaag gccaaagaagc tctgggagat cagcgagaag ctcgtggggc ttgctgagc 180  
 tcgccggcac ggcacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240

tattatgtgt accattagca tccatTTTgt ttgtttctag aagttggtaa tgaccgtcgg 300  
 agaagagcct gtaattgttc gatcatgtat tgcttacaat ttttttttaa a 351

<210> 463  
 <211> 327  
 <212> DNA  
 <213> Zea mays

<400> 463

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60  
 ctggagctgg aacaaggact cggcgtcgtt cgagaaccag ctgtcgcagg aggccagcga 120  
 tccggagaag gccaagaagc tctgggagat cagcgagaag ctcgtggggc ttgcctgagc 180  
 tcgccggcac gcgacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240  
 tattatgtgt accattagca tccatTTTgt ttgtttctag aagttggtaa tgaccgtcgg 300  
 agaagagcct gtaattgttc gatcatg 327

<210> 464  
 <211> 304  
 <212> DNA  
 <213> Zea mays

<400> 464

ggcctgccgc gacttcctca aggcggccaa ggcggccaag ggcgccggca tggcggacgg 60  
 cagctacacc atcatgcacc tggacctggc ctcttcgac agcgtgcggc agttcgtgga 120  
 cagcttcggc cgcgccggca tgccgctcga ctcgctcgtc tgcaacgccg ccatctaccg 180  
 gccacggcg cggacgccga' cgttcacggc ggacgggtac gagatgagcg tcggcgtcaa 240  
 ccacctgggc cacttcctcc tggcgcgcct gctcctggac gacatgcaga agtccgacta 300  
 cccg 304

<210> 465  
 <211> 285  
 <212> DNA  
 <213> Zea mays

<400> 465

cggcatggcg gacggcagct acaccatcat gcacctggac ctggcctccc tcgacagcgt 60



gcggcagttc gtggacagct tccggcgcgc cggcatgccg ctcgactcgc tcgtctgcaa 120  
cgccgccatc taccggccca cggcgcggac gccgacgttc acggcgggacg ggtacgagat 180  
gagcgtcggc gtcaaccacc tgggccactt cgtcctggcg cgcttgcctc tggacgacat 240  
gcagaagtcc gactactcgt cccgccgcct cgtcctcctc ggctc 285

<210> 466  
<211> 147  
<212> DNA  
<213> Zea mays

<400> 466

cccacgcgtc cgcacacgcg tccggtggac agcttcgcgc gcgcgcggcat gccgctcgac 60  
tcgctcgtct gcaacgccgc catctaccgg cccacggcgc ggacgccgac gttcacggcg 120  
gacgggtacg agatgagcgt ccgcgtc 147

<210> 467  
<211> 280  
<212> DNA  
<213> Zea mays

<400> 467

actaaatgcc gaggtgatgg aacttgacct gctctccctc gactcggtcg taaaatttgc 60  
tgatgcttgg acagctcgta tggcaccgct gcacgtgttg atcaacaatg ctgagctctt 120  
cgctatagga gaaccccaac atttttccaa ggatggacat gaagaacaca tgcaagtga 180  
ccatcttgca cctgcattac tggcgatgct gcttatacct tcccttctcc gaggttctcc 240  
cagcagaatt gtaaacgtta attcaatcat gcacagtgt 280

<210> 468  
<211> 277  
<212> DNA  
<213> Zea mays

<400> 468

ctcaaatagc aagctggcac aggtaaaatt cagtagcatg cttcacaaga aaattcctgc 60  
agaggctggc atcgggtgtg tttgcgcttc tcctggaatt gtcgacacga acgttgcaag 120  
agctcttctc aagattgtcg tagccgcgta ccatttgatt ccctacttca tatttgacgc 180

tcaagaaggt tctaggagtg cactgtttgc agcatccgat ccccaagtcc cggaatactg 240  
cgagacgctc aagtcggagg actggccagt ttgtgcc 277

<210> 469  
<211> 436  
<212> DNA  
<213> Zea mays

<400> 469

ggttctccca gcagaattgt taacgttaat tcaatcatgc acagtgtagg ttttgttgat 60  
gctgaagatt tgaacttgag aaaacataaa tatagaagtt ggttggcgta ttcaaatagc 120  
aagttggcac aggtaaaatt tagtagcatg cttcataaga gaattcctgc agaagctggc 180  
atcagcataa tttgtgcttc tcttgggaatt gtcgacacga atgttacaag agaccttcct 240  
aagattgttg tagctgcata ccattttctt ccctacttca tattcgatgg tcaagaaggt 300  
tctaggagtg cactgtttgc agcatgtgac ccccaagttc cagagtactg tgagatgctc 360  
aagtcggaag actggccagt ctgtgcttgc attaactacg actgtaatcc gatgaacgcg 420  
tctgaagaag cgcaca 436

<210> 470  
<211> 335  
<212> DNA  
<213> Zea mays

<400> 470

gtagaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60  
tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120  
gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgca 180  
ctgtttgcag catgtgaccc ccaagttcca gagtactgtt gagatgctca agtcggaaga 240  
ctggccagtc tgtgcttgca ttaactacga ctgtaatccg atgaacgcgt ctgaagaagc 300  
gcacagcttg ataccttcgc agctgggtctg ggaga 335

<210> 471  
<211> 343  
<212> DNA  
<213> Zea mays

<400> 471

gtaaaatgta gtagcatgct tcataagaga attcctgcag aagctggcat cagcataatt 60  
tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120  
gctgcataacc gttttcttcc ctacttcata ttcgatgggc aagaagggtc taggagtgca 180  
ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggtagac 240  
tggccagtct gtgcttgcac taactacgac tgtaatccga tgaacgcgtc tgaagaagcg 300  
cacagccttg aaacctcgca gctggtctgg gagaagcgct cga 343

<210> 472

<211> 262

<212> DNA

<213> Zea mays

<400> 472

gtaaaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60  
tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120  
gctgcataacc gttttcttcc ctacttcata ttcgatgggc aagaagggtc taggagtgca 180  
ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240  
tggccagtct gtgcttgcac ta 262

<210> 473

<211> 256

<212> DNA

<213> Zea mays

<400> 473

gcttcataag agaattcctg cagaagctgg catcagcata atttgctgtt ctccctggaat 60  
tgtcgacacg aatgtttaca gagaccttcc taagattgtt gtagctgcat accgttttct 120  
tccctacttc atattcgatg gtcaagaagg ttctaggagt gactgttttg cggcatgtga 180  
cccccaagtt ccagagtact gtgagatgct caagtcggaa gactggccag tctgtgcttg 240  
cattaactac gactgt 256

<210> 474

<211> 208

<212> DNA  
 <213> Zea mays  
 <400> 474  
 gcttcataag agaattcctg cagaagctgg catcagcata atttgtgctt ctcttggaat 60  
 tgtcgacacg aatgttacaa gagaccttcc taagattggt gtagctgcat accgttttct 120  
 tccctacttc atattcgatg gtcaagaagg ttctaggagt gcaactgtttg cggcatgtga 180  
 cccccaagtt ccagagtact gtgagatg 208

<210> 475  
 <211> 338  
 <212> DNA  
 <213> Zea mays  
 <400> 475  
 gtatgattta gtagcatgct gcataagaga gttcctgcag aagctggcat cagcataatt 60  
 tgtgcttctc ctggaattct cgacacgaat gttacgagaa tccttcctaa gattgttgta 120  
 gctgcatacc gttgtcttcc ctacttcata ttcgatggtc aacaaggttc taggagtgca 180  
 ctgtctgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240  
 tggccagtct gtgcttgcac taactacgac tgtaatccga tgaacgcgac tgaagaagcg 300  
 cacagccttg aaacctcgca gctgggtctgg gagaagac 338

<210> 476  
 <211> 248  
 <212> DNA  
 <213> Zea mays  
 <400> 476  
 gattgatgct gaagatttca acttgagaaa acataaatat agaagttggt tggcgtattc 60  
 aaatagcaag ttggcacagg taaaatttag tagcatgctt cataagagaa ttcctgcaga 120  
 agctggcatc agcataattt gtgcttctcc tggaattgtc gacacgaatg ttacaagaga 180  
 ccttcctaag attgtttag ctgcatacgg tttcccccaa atcaaaatcg atgggtcaaga 240  
 aggttcta 248

<210> 477  
 <211> 341

<212> DNA  
 <213> Zea mays  
 <400> 477  
 gagatcttcc taagattgtc gtagccgct accatttgat tccctacttc atatttgacg 60  
 ctcaagaagg ttctaggagt gcactgtttg cagcatccga tccccaagtc ccggagtact 120  
 gcgagacgct caagtcggag gactggccag tttgtgcctg cattaactat gactgtagtc 180  
 cgatgaatgc gtctgaagaa gcgcacaatc tggagacctc gcagctggtc tgggagaaga 240  
 cactggagat ggtcggcctt ccgccggatg ccctggagaa gctcatcgcc ggagaatcag 300  
 ttcagtgccg ttacggacaa caggatacaa cttactttt t 341

<210> 478  
 <211> 383  
 <212> DNA  
 <213> Zea mays  
 <400> 478  
 gtgcactgtt tgcagcatcc gatccccaag tcccgaata ctgcgagacg ctcaagtcgg 60  
 aggactggcc agggggtgcc tgcattaact atgactgtag tccgatgaat gcgtctgaag 120  
 aagcgacaaa tcttgagacc tcgcagctgg tctgggagaa gacactggag atggtcggcc 180  
 ttccgccgga tgccctggag aagctcatcg ccggagaatc agttcagtgc cgttacggac 240  
 aacaggatac aacttttttag ttagcagttt agaggtgggt tgttcggttg ttatgtcatt 300  
 ttgatcctaa atttgcaggg aggaaaacac agggaaagga gaaaaagaat ttgttgacag 360  
 ctaccaatc ttggtctttt tct 383

<210> 479  
 <211> 166  
 <212> DNA  
 <213> Zea mays  
 <400> 479  
 ggaggactgg ccattttgtg cctgcatgaa ctatgactgt agtccgatga atgcgtctta 60  
 caggagcgca caatcttgag acctcgcagc tggctctggga gaagacactg gagatggtcg 120  
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<210> 480  
 <211> 382  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <400> 480  
  
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 acgcttggag cacgatggca gtatgatcat aaaccggatg aaggaaccgc cgaacggaaa 180  
 cttctataag cctgcataaa cccgatagat tggatctgat tatcccttat tcttgagatc 240  
 tttagttaga gttttccctt ctgtagggct aaaaccacgt gcagcttcat gatataatcct 300  
 gcctctgtac aatcgtgaac aaatattacg tattaatgct ctatctgcct gtattatata 360  
 tgctgctttt tgcccatgtg aa 382

<210> 481  
 <211> 358  
 <212> DNA  
 <213> Zea mays  
  
 <400> 481  
  
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 cagcacgatg gcagtatgat cataaaccgg aagaaggaaac cgaggaatgg aaacttctgg 120  
 aagcctgcat aaaccgaag gattggatct gattagccgt tattcttgag atcttttgtt 180  
 agagttttcc cttctgtagg gctaagacca cgtgcagttt cattatata tttgcatctg 240  
 tagaatcgtg aataaatatg atgtagtaat gctgtagctg tctgtatcta tctgctgttt 300  
 tttcccatg tgaatgagag aaccattggc ttctgtatta cgaaggattc aggtttct 358

<210> 482  
 <211> 275  
 <212> DNA  
 <213> Zea mays  
  
 <400> 482  
  
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 gatctgatta gccgtcattc ttgagatctt ttgttagagt tttcccttct gtagggctaa 120

gaccacgtgc agtttcatta tttctttttg catctgtaga atcgtgaata aatatgatgt 180  
agtaatgctg tagctgtttg tatctatctg ctgttttttc cccatgtgaa tgagtgaacc 240  
attggcttct gtatttacga aggattcagg tttct 275

<210> 483

<211> 335

<212> DNA

<213> Zea mays

<400> 483

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ccaagttttc acccaagatt caaaaaatgg tgtgatgatt atttctatat taagcacctg 120  
aatgagcggc gtgggctagg tggaatat tttgatgacc ttaatgatta cgatcaagaa 180  
atgcttctca actttgctac agaatgtgcg gactctgtac ttcttgcgta cataccgatc 240  
atagaacggc ggaagaacac tccgttcaat gaggagcaca gggcatggca gcaattgcgg 300  
agaggtcgtt atgtggagtt caaccttgct tacga 335

<210> 484

<211> 475

<212> DNA

<213> Zea mays

<400> 484

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ccgatcatag aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa 120  
ttgcggagag gtcgttatgt ggagttcaac cttgtctacg accgtggtac aacatttggc 180  
ctaaagactg gaggaaggat tgagagcata cttgtgtccc ttccacttac agcacgatgg 240  
cagtatgatc ataaaccgga agaaggaacc gaggaatgga aacttctgga agcctgcata 300  
aaccogaagg attggatctg attagccgtt attcttgaga tcttttgta gaagtttccc 360  
ttctgtaggg ctaagaccac gtgcagtttc attatatatt ttgcatctgt agaatcgtga 420  
ataaatatga tgtagtgatg ttgtagctgt ttggatctat ctgctggttt ttccc 475

<210> 485

<211> 329

<212> DNA

<213> Zea mays  
 <223> unsure at all n locations  
 <400> 485  
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 taccgatcat agaacggagg aagaacactc cgttcaacga ggagcacagg gcatggcagc 120  
 aattgcggag aggtcggtat gtggagttca accttgtcta cgaccgtggt acaacatttg 180  
 gcctaaagac tggaggaagg attgagagca tacttgtgtc ncttccactt acagcacgat 240  
 ggcagtatga tcatanaccg gaagaaggaa ccgacgaatg ganacttctg gaagcctgca 300  
 tagacccgaa ggattggatc tgattagcg 329  
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 <212> DNA  
 <213> Zea mays  
 <400> 486  
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 ggctaggtgg aatatTTTTT gatgacctta atgattacga tcaagaaatg cttctcaact 120  
 ttgtctacaga atgtgcggac tctgtacttc ctgcgtacat accgatcata gaacggagga 180  
 agaacactcc gttcaacgag gagcacaggg catggcagca attgcggaga ggtcggttatg 240  
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 <212> DNA  
 <213> Zea mays  
 <400> 487  
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 ttctcaactt tgctacagaa tgtgcggact ctgtacttcc tgcgtaata ccatcatag 120  
 aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa ttgcggagag 180  
 gtcgttatgt ggagttcaac cttgtctacg accgtggtac aacatttggc ctaaagactg 240  
 gaggacggat tgacag 256



<210> 488  
 <211> 247  
 <212> DNA  
 <213> Zea mays  
  
 <400> 488  
  
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 cttcctgcgt acataccgat catagaacgg cggaagaaca ctccgttcaa tgaggagcac 120  
 agggcatggc agcaattgcg gagaggctgt tatgtggagt tcaaccttgt ctacgaccgt 180  
 ggtaccacat ttggcctaaa gactggagga aggattgaga gcatacttgt gtcccttccg 240  
 cttacag 247

<210> 489  
 <211> 236  
 <212> DNA  
 <213> Zea mays  
  
 <400> 489  
  
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 gttatgtgga gttcaacctt gtctacgacc gtggtaccac atttggccta aagactggag 120  
 gaaggattga gagcatactt gtgtcccttc cgcttacagc acgatggcag tatgatcata 180  
 aaccggaaga aggaaccgag gaatggaaac ttctggaagc ctgcataaac ccgaag 236

<210> 490  
 <211> 430  
 <212> DNA  
 <213> Zea mays  
  
 <400> 490  
  
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 attcttcgcc gcggggatta gttcggtgct tcacccaag aaccatttg ctccaacatt 120  
 gcattttaac taccgttact ttgagacgga tgcacaaaaa gatgcacctg gtgcaccaag 180  
 acaatggtgg ttcggcggtg gtactgactt gactccttca tatatcattg aagaggatgt 240  
 gaagcatttc cattctgttc aaaagcaagc atgtgataaa tttgatccaa gttttcaccc 300  
 aagattcaaa aaatggtgtg atgattatth ctatattaag caccgtaatg agcggcgtgg 360  
 gctaggtgga atatthtttg atgaccttaa tgattacgat caagaaatgc ttctcaactt 420

tgctacagaa 430

<210> 491  
<211> 304  
<212> DNA  
<213> Zea mays

<400> 491

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gttcggtgct tcacccaag aaccatttg ctccaacatt gcattttaac taccgttact 120  
ttgagacgga tgcacaaaa gatgcacctg gtgcaccaag acaatggtgg ttcggcggtg 180  
gtactgactt gactccttca tacatcattg aagaggacgt gaagcatttc cattctgttc 240  
aaaagcaagc atgtgataaa tttgatccaa gttttcacc aagattcaaa aaatggtgtg 300  
atga 304

<210> 492  
<211> 307  
<212> DNA  
<213> Zea mays

<400> 492

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cttcgccgcg gggattagtt cggtgcttca cccaagaac ccatttgctc caacattgca 120  
ttttaactac cgttactttg agacggatgc accaaaagat gcacctggtg caccaagaca 180  
atggtggttc ggcggtggtg ctgacttgac tccttcatac atcattgaag aggacgtgaa 240  
gcatttccat tctgttcaaa agcaagcatg tgataaattt gatccaagtt ttcaccaag 300  
attcaaa 307

<210> 493  
<211> 173  
<212> DNA  
<213> Zea mays

<400> 493

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tgactccttc atacatcatt gaagaggacg tgaagcattt ccattctgtt caaaagcaag 120

catgtgataa atttgatcca agttttcacc caagattcaa aaaatggtgt gat 173

<210> 494  
 <211> 118  
 <212> DNA  
 <213> Zea mays

<400> 494

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gcggaggtac tgacttgact ccttcataca tcattgaaga ggacgtgaag catatcca 118

<210> 495  
 <211> 304  
 <212> DNA  
 <213> Zea mays

<400> 495

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ctatgttgca ggagttgacc tgggcagatg cggtgagggc gcgtatgaaa gtgcctcgca 120

aatatctgac ttcttgacca agtatgccta caagtgatga aagaagtgga gcgctacttg 180

ttaattgttt atgttgcata gatgaggtgc ctacgggaaa aaaaagcttt aatagtattt 240

tttattctta ttttgtaa at tgcatttctg ttcttttttc tgtcattaat tacttatatt 300

ttag 304

<210> 496  
 <211> 295  
 <212> DNA  
 <213> Zea mays

<400> 496

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cctcgcaaat atctgacttc ttgaccaagt atgcctacaa gtgatgaaag aagtggagcg 120

ctacttgтта atcgtttatg ttgcatagat gaggtgcctc cgggggaaaaa aagcttgaat 180

agtatTTTTT attcttattt tgtaaattgc atttctgttc ttttttctat cagtaattag 240

ttatatttta gttctgtagg agattgttct gttcactgcc cttcaaaaga atttt 295

<210> 497  
 <211> 305  
 <212> DNA  
 <213> Zea mays  
  
 <400> 497  
  
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 gctgaggtct tcgagcgcct cattgagcct ttctgctcag gtgtctatgc tggatgacct 180  
 tctaagctca gcatgaaggc tgcatttggg aaggtttggc ggttgggaaga aactggaggt 240  
 agtattattg gtggaaccat caagacaatt caggagagga gcaagaatcc aaaaccactg 300  
 aggga 305

<210> 498  
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 <212> DNA  
 <213> Zea mays  
  
 <400> 498  
  
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 aatcttggtg ctgaggtctt cgagcgcctc attgagcctt tctgctcagg tgtctatgct 120  
 ggtgacacct ctaagctcag catgaaggct gcatttggga aggtttggcg gttggaagaa 180  
 actggaggta gtattattgg tggaacatca agacaattca ggagaggagc aagaatccaa 240  
 aaccactgag ggatgccccgc cttccgaagc 270

<210> 499  
 <211> 423  
 <212> DNA  
 <213> Zea mays  
  
 <400> 499  
  
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 agttgcatcc acgtagtcaa ggagttgaga cattaggaac aatatacagt tcctcactct 120  
 ttccaaatcg tgctcctgac ggtaggggtg tacttctaaa ctacatagga ggtgctacaa 180  
 acacaggaat tgtttccaag actgaaagtg agctggtcga agcagttgac cgtgacctcc 240  
 gaaaaatgct tataaattct acagcagtgg accctttagt ccttggtggt cgagtttggc 300

cacaagccat acctcagttc ctggtaggac atcttgatct tctggaagcc gcaaaagctg 360  
 ccctggaccg aggtggctac gatgggctgt tcctaggagg gaactatgtt gcaggagttg 420  
 ccc 423

<210> 500  
 <211> 314  
 <212> DNA  
 <213> Zea mays

<400> 500

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 ccaatcgcca gtacgggtcca aagagcaggt gagggagctc gtcccatcg accttgatat 120  
 gctccagttc gtcggggagt cactaaagat tctgcgaaat gagattgatg gaaaagctgc 180  
 tttgctagga tttgtggggg ccccatggac aattgcaact tacattgttg aaggggggat 240  
 gaccaatcgc tacacaaata taaagagcat gtgccatata gctccagatg tcttgaaggg 300  
 tcttctctct cact 314

<210> 501  
 <211> 287  
 <212> DNA  
 <213> Zea mays

<400> 501

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 attctacaca atttgcata gaagttcaca acatcaatgg ctaactatat taaataccaa 120  
 gcggacaatg gggcgccaggc tgtccaaatt ttcgattcat gggctactga actcagcccc 180  
 actgattttg aggagtttag cctgccttat ctaaagcaga tagtggatag tgtaggggaa 240  
 acacatccta acttgcctct gatactctac gcaagtggat ctggggg 287

<210> 502  
 <211> 272  
 <212> DNA  
 <213> Zea mays

<400> 502

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cagtgggtcaa aaccatatat caaacaggag ttgatgttat tgggcttgac tggacagtgg 120  
acactactga tggaaggtgg cgccttggta atggcattag tgtacaaggg aatgtggatc 180  
cagcattttt gttctcacca ttaccagtac tgactgatga aattcataga gttgtgaaag 240  
cagctgggtcc aaaaggtcat accttaatct gg 272

<210> 503  
<211> 407  
<212> DNA  
<213> Zea mays

<400> 503

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ggtgttcttt ttggatccaa agagtttata agcaggcgga tttacgacac tgtgcagaag 120  
gctggcaatg ttggacatgt actgaacctt ggccatggca tcaaggttgg aactccggag 180  
gaaaatgttg ctcaattctt cgaggtcgca aaagggatca gatactaaag aaccttgcac 240  
ggttctttcc tttctccaaa tcggcagaag ttgtagagtc ggcggtcgag gatagatgca 300  
gaaagccatg tgcaagtatag agtccctgaa aacatttttg tgactgattc tgtctgtcgc 360  
aattcaagtt ccggtttcaa tgtgatattg taagcagatt tgagacg 407

<210> 504  
<211> 418  
<212> DNA  
<213> Zea mays

<400> 504

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ctaaggatgg gcattttgcc ctggaggagc tggcccaagc tggctatgag gtggttgggc 120  
ttgactggac agtggcccca aagaaagccc gggagtgtgt ggggaagacg gtgacattgc 180  
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agcagatgct ggatgacttt ggaccacatc gctacattgc caacctgggc catgggcttt 300  
atcctgacat ggaccagaa catgtgggcg cctttgtgga tgctgtgcat aaacactcac 360  
gtctgcttcg acagaactga gtgtatacct ttaccctcaa gtaccactaa cacagatg 418

<210> 505  
 <211> 508  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <400> 505  
  
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 tccggtaatt cgccggggga ggaccaccg cgtgccgcga gcggctgcaa ccacctactc 120  
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 cgcgccaggt ccgcccgcac catgcccaaga cgcaagcagc tcacggccgt ccgctgcagc 240  
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 gtgagcgcaa tcagagggac gaaggctcag aagccaccg tatggctcat gaggcacgcc 360  
 gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttcgtt ccgtgaaaga 420  
 tcagaaaatg tcgacctagt tgttgagatc tctttgcaac catggaaggt tttcaagcct 480  
 gaaggaatca tcttggtctc ggacattc 508

<210> 506  
 <211> 387  
 <212> DNA  
 <213> Zea mays  
  
 <400> 506  
  
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 ctgattttga ggagtttagc ctgccttata taaagcagat agtggatagt gttagggaaa 120  
 cacatcctaa cttgcctctg atactctacg caagtggatc tgggggcttg ctggagaggc 180  
 ttcctttgac aggtggtgat gttgtcagct tggactggac ggtcgatatg gcagagggca 240  
 ggaaaagatt gggatctaac acagcagtc aagggaaacgt ggatcctggt gttctttttg 300  
 gatccaaaga gtttataagc aggcggatth acgacactgt gcagaaggct ggcaatgttg 360  
 gacatgtact gaaccttggc catggca 387

<210> 507  
 <211> 288  
 <212> DNA  
 <213> Zea mays

<400> 507

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gaggcaggcc gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttgctc 120  
cgtgaaagat cagaaaatgt cgacctagtt gttgagatct ctttgcaacc atggaagggt 180  
ttcaagcctg atggagtcac cttgttctcg gacatcctta ctccacttcc tgggatgaac 240  
ataccttttg acattgtgaa gggaaaaggc ccagtgatct atgatcca 288

<210> 508

<211> 409

<212> DNA

<213> Zea mays

<400> 508

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tcgctgccgt ccacctccct ctcccgccgc aggtccgccc gcgccggggc cagacgcagg 120  
cagctcacgg ccgtccgctg cagcgccgctc ggagaggcgg tagtgaggga ggcctcgccc 180  
gggacggcgg aagagccgct gctggtgagc gcaatcagag ggaggaaggc cgagaggcca 240  
cccgtctggc tcatgaggca ggccgggagg tacatgaaga gctaccaatt gctctgcgag 300  
cggtatcctt cgttccgtga aagatcagaa aatgtcgacc tagttgttga gatctctttg 360  
caaccatgga aggttttcaa gcctgatgga gtcattctgt tctcggaca 409

<210> 509

<211> 407

<212> DNA

<213> Zea mays

<400> 509

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cagcacctgg gatcccgccc caatggcaac agcgtgtccg ccgctctcgc tgccgtccac 120  
ctccctcttc cgcggcaggc ccgcccgcgc cgggcccaaga cgcaggcagc tcacggccgt 180  
ccgctgcagc gccgtcggag aggcggtagt ggaggaggcc tcgcccggga cggcggaaga 240  
gccgctgctg gtgagcgcaa tcagaggag gaaggctgag aggccacccg tctggctcat 300  
gaggcaagcc gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttcgtt 360



ccgtgaaaga tcagaaaatg tcgacctagt tgttgagatc tctttgc 407

<210> 510

<211> 275

<212> DNA

<213> Zea mays

<400> 510

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catggacaat tgcaacttac attgttaaag gggggatgac caacacatac acaaataataa 120

agaacatgtg ccatacagct cccgatgtct taggtgtctt ctatctcatc ttgcagtagc 180

gatatctgac tatatcattt accaagttaa ctccggggcc cagtgtatac agatatttga 240

ttcatggggc ggacaacttc cacctcatgt gtggg 275

<210> 511

<211> 266

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<400> 511

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cggcgggcggc cgtnaggcg ccgtccggga ggaccatcga ggagtgcgag gccgacgccg 120

tcgctgggaa gttccctgct cccccgccgc tggttaggcc gaagcgcctg aaggaacgcc 180

ggagatcagg ccccttgaca tggcaaagcg cccccgtcgc aaccgcaaat cacctgctct 240

tagggctgca ttccaggaga cgagca 266

<210> 512

<211> 293

<212> DNA

<213> Zea mays

<400> 512

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gcagaagggtg atgatggagt cgctcatgtg cctgcgcgag ccggcgccga cgtcatcctg 180

acctacttcg cccgtcacgc cgccgcggtg ctgtgcggca tggggcccaa gtaggaggcg 240

aggccccgcc gccattcctg ccctgcactg tcattgtgga gttgagcgat gag 293

<210> 513  
 <211> 279  
 <212> DNA  
 <213> Zea mays

<400> 513

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 cagagaagcc ctcatagaaa ccgcatcgga cgaggcagaa ggagccgaca ttctgctagt 120  
 gaaaccggga ttgccgtact tggacattat ccgactgctt cgggatcatt cagccctacc 180  
 gagtgtgtgt taccaggtct cgggcgagta ctcgatgatc agagccggag gggccctggg 240  
 catggtggac gagcataagg tgatgatgga gtcgctcat 279

<210> 514  
 <211> 287  
 <212> DNA  
 <213> Zea mays

<400> 514

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 ttggagataag acgacgtacc agatgaaccc agccaactac agagaagccc tcatagaaac 120  
 cgcagcggac gaggcagaag gagccgacat tctgctagtg aaaccgggat tgccgtactt 180  
 ggacatcatc cgactgcttc gggatcattc agccctaccg attgctgctt accaggtctc 240  
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<210> 515  
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 <213> Zea mays

<400> 515

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 tgttggtgtt aatagtttcg ttctctttcc taaagttccc gatgcattga agtctccaac 180  
 aggagatgaa gcgtacaacg ataatggtct ggttccacgt acaatccgct tgctcaagga 240

caagttccct gatattgtta tctacacaga cgtcgcgta gacccttatt catctgatgg 300  
tcatgatggg attgtgaggg aagatgggtg aattatgaat gatgaaacag tttatcagtt 360  
gtgcaaacag gctgtttcac aggctcgtgc cgggtgctgat gttgtcagcc ctagtgcacat 420  
gatggat 427

<210> 516  
<211> 303  
<212> DNA  
<213> Zea mays

<400> 516

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tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctgggttcc 120  
acgtacaatc cgcttgctca aggacaagtt ccctgatatt gttatctaca cagacgtcgc 180  
gtagaccct tattcatctg atggatcatga tggatattgtc aggggaagatg gtgtaattat 240  
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tga 303

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<211> 277  
<212> DNA  
<213> Zea mays

<400> 517

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tcagccctag tgacatgatg gatggccgga ttggagcact tcgctctgct ctggacgccg 180  
agggcttcca tgatgtctcc attatgtcct acaccgcaaa gtatgccagt tcattttatg 240  
gccctttccg agaagcttta gattcaaate caagatt 277

<210> 518  
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<212> DNA  
<213> Zea mays

<400> 518

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 acgtacaatc cgcttgctca aggacaagtt ccctgatatt gttatctaca cagacgtcgc 180  
 gttagaccct tattcatctg atgggtcatga tgggtattggt aggggaagatg gtgtaattat 240  
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<210> 519  
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 <212> DNA  
 <213> Zea mays

<400> 519

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 tattgtgagg gaagatgggtg taattatgaa tgatgaaaca gtttatcagt tgtgcaaaca 180  
 ggctgtttca caggctcgtg ccggtgctga tgttgctcagc cctagtgaca tgatggatgg 240  
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 gtcccta 306

<210> 520  
 <211> 391  
 <212> DNA  
 <213> Zea mays

<400> 520

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 ggcacgggct gcttgacgag gtttacaggg gcgcgcgatg ttgggtgttaa tagttttggt 180  
 ctctttccta aagttcccga tgcattgaag tctccaacag gagatgaagc gtacaacgat 240  
 aatgggtctgg ttccacgtac aatccgcttg ctcaaggaca agttccctga tattgttatc 300  
 tacacagacg tctctttttt ttcttagtca tctgatggtc actatgggat tgttacggaa 360  
 gatggggtaa ttatgaatga tgaaacactt t 391

<210> 521  
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 <212> DNA  
 <213> Zea mays  
  
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 acgtacaatt c 191

<210> 522  
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 <212> DNA  
 <213> Zea mays  
  
 <400> 522  
  
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 tgatgttg 128

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 <213> Zea mays  
  
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 tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag ggcgccgtcc 240  
 gggaggacca tccaggagtg cgaggccgac gccgtcgtg ggaagttccc tgctcccccg 300  
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<400> 524

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ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaaga gccggggccaa 180  
ggctgcgctc cacggccgctc cgggtcagca gcgagcagga ggccggcgcg gccgtcaggg 240  
cgccgtccgg gaggaccatc gaggagtgcg aggccgacgc cgtcgctggg aagttccctg 300  
ctccccgcc gctgggttagg ccg 323

<210> 525

<211> 252

<212> DNA

<213> Zea mays

<400> 525

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gagtggccac ggccacgcc ccttttgaag ctgttccgcc gtgccaaagag ccggggccaag 180  
gctgcgctcc acggccgctc gggtcagcag cgagcaggag gcggcgggcg ccgatcaggc 240  
gccgtccggg ag 252

<210> 526

<211> 304

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<400> 526

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taggagntgg cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccggggc 180  
aaggctgcgc tccacggccg tccgggtcag cagcgagcag gagggcgcg cgcccgctcag 240  
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tgct 304

<210> 527  
 <211> 295  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
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 taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccggggc 180  
 aaggctgcgc tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag 240  
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<210> 528  
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 <212> DNA  
 <213> Zea mays  
  
 <400> 528  
  
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 ctccaggcta ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaaga 180  
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<210> 529  
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 <212> DNA  
 <213> Zea mays  
  
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 aggctgcgct ccacggccgt ccgggtcagc agcgagcagg aggcggcggc ggccgtcaag 240  
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 gc 302

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 <212> DNA  
 <213> Zea mays  
  
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 tgctccaggc taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgcaa 180  
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 cg 242

<210> 531  
 <211> 255  
 <212> DNA  
 <213> Zea mays  
  
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 ggctaggagt ggccacggcc acgccacctt tggaagctgt tccgccgtgc caagagccgg 180  
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 caggcggcgt cccgg 255

<210> 532  
 <211> 280  
 <212> DNA  
 <213> Zea mays  
  
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 ttgtcactct tttggttaga aacagagggc ccaagtagag tgtggagagg tttgtttttg 180  
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<210> 533  
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 <212> DNA  
 <213> Zea mays  
  
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 ctgtactatc agtgggaagaa atgcttcagg cagttgcccc aggtgctatt ggaatcgctt 180  
 gccgaagcaa cgatgacaaa atgatggagt atctgtcctc gttgaaccac gaggatacca 240  
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 caattgcggc ctatgcttac cgtga 325

<210> 534  
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 <212> DNA  
 <213> Zea mays  
  
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 taacttcaga ggaaatgttc agacacgggt aaggaaactc actgaaggag atgtgtctgc 180  
 tacattgttg gcgctggctg gattaaggca gctaaatatt gcagaaaatg caacagctgt 240  
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 <213> Zea mays  
  
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 gaactgaagg cgaaggctgg gcctggcttc ttcatagacc ttcaatgaac agaattgtgcg 180  
 gccatgcgcg atttcagttg gcaccctttc gggtgaaaac gagggccata gtaggttggt 240

gagggggttg tttttgtttc ttcttttttt ctctactac ta 282

<210> 536  
 <211> 174  
 <212> DNA  
 <213> Zea mays

<400> 536

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 ggcaagaagt ggaccgtact ctttcgacga catggctgag atgggcaaag acgctggcca 120  
 cgagctgaag gcgaaggctg ggcttggctt cttcgatagc cttcaatgaa caga 174

<210> 537  
 <211> 315  
 <212> DNA  
 <213> Zea mays

<400> 537

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 cgagctgaag gcgaaggctg ggcttggctt cttcgatagc cttcaatgaa cagaatgtgc 180  
 ggccatgcgc gatttcagtt ggcacccttt cgggtgaaaa cgagggccaa agtaggttgt 240  
 tcaggggctt gtttgtgata cttctgagtt tctctacta ctaggtcctg ctagagcctt 300  
 gtactaccac tcatg 315

<210> 538  
 <211> 338  
 <212> DNA  
 <213> Zea mays

<400> 538

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 tgctggcagt gttgttgga gtgcttcctt gcggagacaa tctcagattc tctacagata 180  
 tccatcactg aaagtagtta acttcagagg aaatgttcag acacgggttaa agaaactcaa 240  
 ggaaagagat gtgtctgcta cattgttggc gctggctgga ttaaagcggc taaaaatggc 300

agaaaatgca acagctgtac tatcagtgga agaaatgc 338

<210> 539  
 <211> 422  
 <212> DNA  
 <213> Zea mays

<400> 539

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 agatcgtcat cataaagacc acaggagaca tgatcttggg caaaccctt gcagatattg 180  
 gaggcaaggg tttattcacc aaggagatag atgatgcact cttgcaggga aggattgata 240  
 tagctgtgca ctctatgaaa gatgttccaa catatctacc tgaaggcaca atattgccct 300  
 gtaacctccc acgagaagat gtaagagatg cattcatatg cttgactgca aattcgctcg 360  
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 tc 422

<210> 540  
 <211> 280  
 <212> DNA  
 <213> Zea mays

<400> 540

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 tagctgagga gggggctatt gagatcgtca tcataaagac cacaggagac atgatcttgg 120  
 acaaaccctt tgcagatatt ggaggcaagg gtttattcac caaggagata gatgatgcac 180  
 tcttgcaggg aaggattgat atagctgtgc actctatgaa agatgttcca acatatctac 240  
 ctgaaggcac aatattgccc tgtaacctcc caccagaaga 280

<210> 541  
 <211> 255  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 541

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 gcactctatg aaagatgttc caacatatct acctgaaggc acaatattgc cctgtaacct 120  
 cccacgagaa gatgtaagag atgcattcat atgcttgact gcaaattcgc tcgcggantt 180  
 cctgctggca gtgttggttg aagtgccttc ttgctggagac aatctcagat tctctacaga 240  
 tatccatcac tgaaa 255

<210> 542  
 <211> 269  
 <212> DNA  
 <213> Zea mays

<400> 542  
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 atatgcttga ctgcaaattc gctcgcgag cttcctgctg gcagtgttgt tggaagtgct 180  
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 agaggaaatg ttcagacacg gttaaggaa 269

<210> 543  
 <211> 334  
 <212> DNA  
 <213> Zea mays

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 ctacaatgat gtgcaccgca gtgatcaaac tgttcgaaga caaaccctg gagattgcgg 180  
 gcgtcctcct cgaaccagtt gttggcaacg ctcgtttcat ccctccagag acatgggttc 240  
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 atgaccggct tccgtctgtc ttacggtgga cctc 334

<210> 544  
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 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 544

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tactggacgt cgggtgcgaaa gcagggcatg atatgtgcgg aggacatatc agaggaatgt 180
ttggcttctt cttcacccggc gggcccgtcc acaacttcgg ggacgccaaag aagagcgaca 240
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cgcagttcga ggcggngttc accagcttgg cgcacacctt ccaggacatc gagaagaccg 360
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gagagcatt 429
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<210> 545  
 <211> 403  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 545

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tgccggaggac atatcagagg aatgttttggc ttcttcttca ccggcggggc cgtccacaac 180
ttcgggggac ccaagaagag cgacaccgag aagttcggga ggttctaccg tggcatgctg 240
gaggagggcg tgtacttcgc tccctcgcag ttcgaggcgg ggttcaccag cttggcgcac 300
acctcccagg acatcgagaa gaccgtcgag gccgctgaga aggttctgaa gcggatatan 360
gggggtccgt tcaagcaagc atgcagagag catttcctcg tat 403
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<210> 546  
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 <212> DNA  
 <213> Zea mays

<400> 546

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gcaacgctgg tttcatcccc ccacagcctg gtttccttaa cgctctccgc gacttgacca 120
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aacaggatgg tgcgctcctg gtcttcgatg aagtgatgac cggttccgt ctgtcttacg 180  
gtggagctca ggagtacttc gggatcacc ctgacgtgac gacctgggc aagatcatcg 240  
ggggtggcct ccccgttggt gcctacggtg ggagaaggga catcatggag atggttggcc 300  
ccgaaggccg at 312

<210> 547  
<211> 286  
<212> DNA  
<213> Zea mays

<400> 547

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aagatcaccg gcgaactcgt ccgtgggata ctggacgtcg gtgcgaaagc agggcatgag 180  
atgtgcggag gacatatcag aggaatgttt ggcttcttct tcaccggcgg gcccgccac 240  
aacttcgggg acgccaagaa gagcgacacc gagaagtctg ggaggt 286

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<212> DNA  
<213> Zea mays

<400> 548

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tcagcgggaa ccctctagcc atgaccgctg ggatccacac gctcaagcgg ctgacagagc 180  
ccggcaccta cgagtacttg gacaagatca ccggcgaact cgtccgtggg atactggacg 240  
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<210> 549  
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<213> Zea mays

<400> 549

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ggacatcatg gagatgggtg cccccgcage cgatgtacca ggcaggaact ctcagcggga 180  
accctctagc catgaccgct gggatccaca cgctcaagcg gctgacagag cccggcacct 240  
acg 243

<210> 550  
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<212> DNA  
<213> Zea mays

<400> 550

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ctgacgtgac gaccttgggc aagatcatcg ggggtggcct cccgttgggt gcctacggtg 180  
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cagcggg 247

<210> 551  
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<212> DNA  
<213> Zea mays

<400> 551

gcacgaggca gggccgatgt accaggcagg aactctcage gggaaccctc tagccatgac 60  
cgctgggatc cacacgctca agcggctgac agagcccggc acctacgagt acttggacaa 120  
gatcacccgc gaactcgtcc gtgggatact ggacgtcggg gcgaaacagg gcatgagatg 180  
tgcggaggac atatcagagg aatgtttggc ttcttcttca ccg 223

<210> 552  
<211> 218  
<212> DNA  
<213> Zea mays

<400> 552

gcacgaggca gggccgatgt accaggcagg aactctcage gggaaccctc tagccatgac 60  
cgctgggatc cacacgctca agcggctgac agagcccggc acctacgagt acttggacaa 120

gatcaccggc gaactcgtcc gtgggatact ggacgtcggc gcgaaagcag ggcatgagat 180  
gtgcggaggga catatcagag gaatgtttgg cttcttct 218

<210> 553  
<211> 275  
<212> DNA  
<213> Zea mays

<400> 553

gcgaaacagg gcatgagatg tgcggaggac atatcagagg aatgtttggc ttctacttca 60  
ccggcggggcc cgtccacaac ttcggggacg ccaagaagag cgacaccgag aagttacaga 120  
ggttctaccg tggcatgctg gaagaggcgt gtacttcgct ccctcgcagt tcgaggcggg 180  
gttcaccagc ttggcgcaca cctcccagga catcgagaag accgtcgagg ccgtaatgaa 240  
ggttctgaag cggatatagg gggtagcctt caagc 275

<210> 554  
<211> 252  
<212> DNA  
<213> Zea mays

<400> 554

cttcggggac gccaaaga ggcacaccga gaagtccggg aggttctacc gtggcatgct 60  
ggaggagggc gtgtacttcg ctccctcgca gttcgaggcg gggttcacca gcttggcgca 120  
cacctccag gacatcgaga agaccgtcga ggccgctgag aaggttctga agcggatata 180  
gggggtccgc ttcaagcaag catgcagaga gcatttcctc gtatctacgt tcttgtactc 240  
ttagttctat at 252

<210> 555  
<211> 295  
<212> DNA  
<213> Zea mays

<400> 555

ctctagccat gaccgctggg atccacacgc tcaagcggct gacagagccc ggcacctacg 60  
agtacttgga caagatcacc ggcgaactcg tccgtgggat actggacgtc ggtgcgaaag 120  
cagggcatga gatgtgcgga ggacatatca gaggaatgtt tggcttcttc ttcaccggcg 180



ggcccgtcca caacttcggg gacgccaaga agagcgacac cgagaagttc gggaggttct 240  
acgtggcatg cctggagagg gcgtgtactt cggctccctc gcagttcgag gcggg 295

<210> 556  
<211> 331  
<212> DNA  
<213> Zea mays

<400> 556

ccacgcgtcc gagggcgtgt acttcgctcc ctgcgagttc gaggcggggg tcaccagctt 60  
ggcgcacacc tcccaggaca tcgagaagac cgtcgaggca gctgagaagg ttctgaagcg 120  
gatatagggg gtccgcttca agcaagcatg cagagagcat ttctctgtat ctacgttctt 180  
gtactcttag ttctatatgc caccgaggtt ttgtattgtg cagcagcagg acagcttctg 240  
taagttcctc tttctgaatt agtgggtctt gtttttgtca gtgccaataa atctctggtc 300  
cacgattacg gtttcgttgt tgtactgatg t 331

<210> 557  
<211> 423  
<212> DNA  
<213> Zea mays

<400> 557

gacccaatcg ccgcaaacc ctccggaatt tcttatcccc cctcatctgc tccacctcgg 60  
acctcgcgcg agacgagcaa gcccaagtat ggccggagca gcagcagccg ccgtggcgtc 120  
cggggtctcg gcccggccgg ccgcgcgag gagggcttct gcgggacgcc gcgctcggct 180  
gtcggtggtg cgggccgcga tatccctcga gaagggcgag aaggcgta ca cgggtgcagaa 240  
gtccgaggag atcttcaacg ccgccaagga gctgatgcct ggaggtgtta actcgccagt 300  
ccgagccttc aaatctgttg gtgggcagcc agtagttttc gactctgtaa agggttctcg 360  
tatgtgggat gttgatggga atgagtacat tgattacgtt ggttcctggg gtccctgcaat 420  
cat 423

<210> 558  
<211> 302  
<212> DNA  
<213> Zea mays

<400> 558

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cggacgcgtg ggcggacgcg tgggcgccga ggagggcttc tgcgggacgc cgcgctcggc 60
tgtcgggtggg gcgggccgcg atatccctcg agaagggcga gatagcgtac acggtgcagc 120
agtccgagga gatcttcaac gccgccaatg agctgatgcc tggaggtggt aactcgccag 180
tccgagcctt caaatctggt ggtgggcagc cagtagtttt cgactctgta aagggttctc 240
gtatgtggga tgttgatggg aatgagtaca ttgattacgt tggttcctgg ggtcctgcaa 300
tc 302
```

<210> 559

<211> 305

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<400> 559

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ctgctccacc tccgacctcg cgcgagacga gcaagcccaa gtatggccgg agcagcagca 60
gccgccgtgg cgtccggagt ctcgggcccg cggccgcgcg cgaggagggc ttctgcggga 120
cgccgcgctc ggctgtcggg ggtgcggggc gcgatatccc tcgagaangg cgagaaggcg 180
tacacggtgc agaagtccga ggagatcttc aaggccgcca aggagctgat gcctggaggt 240
gttaactcgc cagtccgagg cttcaaatct gttgggtggg agccagtagt ttcgactctg 300
taaag 305
```

<210> 560

<211> 276

<212> DNA

<213> Zea mays

<400> 560

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gctccacctc cgacctcgcg cgagacgagc aagcccaagt atggccggag cagcagcagc 60
cgccgtggcg tccgggggtct cggccccggc ggccgcgcgc aggagggctt ctgcgggacg 120
ccgcgctcgg ctgtcgggtg tgcgggcccgc gatatccctc gagaagggcg agaaggcgta 180
cacggtgcag aagtccgagg agatcttcaa cgccgccaaag gagctgatgc ctggaggtgt 240
taactcgcca gtccgagcct tcaaatctgt tgggtgg 276
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<210> 561  
 <211> 225  
 <212> DNA  
 <213> Zea mays  
  
 <400> 561  
  
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 ggtggtgcgg gccgcgatat ccctcgagaa gggcgagaag gcgtacacgg tgcagaagtc 120  
 cgaggagatc ttcaacgccg ccaaggagct gatgcctgga ggtgttaact cgccagtcgg 180  
 agccttcaaa tctgtatgtg ggcagccagt agttttcgac tctgt 225

<210> 562  
 <211> 276  
 <212> DNA  
 <213> Zea mays  
  
 <400> 562  
  
 cagacgcgtg ggcgagacgc gtgggctgct ccacctccga cctcgcgcgga gacgagcaag 60  
 cccaagtatg gccggagcag cagcagccgc cgtggcgctc ggggtctaca cccggccgga 120  
 cgcgccgagg agggcttctg cgggacgccg cgctcggtcg tcggtggtgc gggccgcgat 180  
 atccctcgag aaggggcgaga aggcgtacac ggtgcagaag tccgaggaga tcttcaacgc 240  
 cgccaaggag ctgatgctg gaggtgttaa ctcgcc 276

<210> 563  
 <211> 251  
 <212> DNA  
 <213> Zea mays  
  
 <400> 563  
  
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 agcagcagcc gccgtggcgt ccgggggtctc ggccccggccg gccgcgccga ggagggcttc 120  
 tgcgggacgc cgcgctcggc tgctggtggt gcggggccgcg atatccctcg agaagggcgga 180  
 gaaggcgtac acggtgcaga agtccgagga gatcttcaac gccgccaagg agctgatgcc 240  
 tggaggtggt a 251

<210> 564  
 <211> 337

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<212>      DNA
<213>      Zea mays

<400>      564

caagtatcga aatggtccgc tttgtcaact caggacaga agcctgcatg ggagcgctcc   60
gcctcgtgcg cgcattcacc gggcgggaga agatcatcaa gttcgaaggc tgctaccatg   120
gccatgccga ttccttcctt gtcaaagccg gcagtgggtg tgccaccctt ggcatcactg   180
actcccctgg cgtccccaag ggggccacct acgagacttt gacggcaccc tacaatgatg   240
tcgcggcagt gaagaaactg ttcgacgaca acgcggggga gattgctgcc gtcttcctcg   300
agtcagttgt tggcaacgct ggtttcaatc cccaca                                337

<210>      565
<211>      263
<212>      DNA
<213>      Zea mays

<400>      565

gaaactctga agaaaggaac tagctttggt gtcctatggt tgctggagaa cgtattggct   60
gagatggtca tctctgccgt gccaaagtac gaaatgggcc gctttgtcaa ctcagggaca   120
gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca ccgggcggga gaagatcatc   180
aagttcgaag gctgctacca tggccatgcc gattccttcc ttgtcaaagc cggcagtggt   240
gttgccaccc ttggcctccc tga                                           263

<210>      566
<211>      310
<212>      DNA
<213>      Zea mays

<400>      566

gaacaccacg aatcgtctgc attcggctcg aggacactct gaagaaagga actagctttg   60
gtgctccatg tttgctggag aacgtattgg ctgagatggt catctctgcc gtgccaagta   120
tcgaaatggt ccgctttgtc aactcaggga cagaagcctg catgggagcg ctccgcctcg   180
tgcgcgcatt caccgggcgg gagaagatca tcaagttcga aggctgctac catggccatg   240
ccgattcctt ccttgtcaaa gccggcagtg gtgttgccac ccttggcctc cctgactccc   300
ctggcgctcc                                310

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<210> 567  
 <211> 124  
 <212> DNA  
 <213> Zea mays  
 <400> 567  
 gctttgtcaa ctcagggaca gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca 60  
 ccgggcggga gaagatcatc aagttcgaag gctgctacca tggccatggc gaatccttcc 120  
 ttgt 124

<210> 568  
 <211> 295  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <400> 568  
 cggacgcgtg gcgagacgcg tgggaggacg cgtgggcctt gtcaaagccg gcagtgggtgt 60  
 tgccaccctt ggctccctg actcccctgg cgteccacac ggggccacca cctgagactt 120  
 tgacangaac cctacaatga tgtcgcggca gtgaagaaac tgttcgagga caacgcgggg 180  
 gagattgctg ccgtcttctc cgagccagtt gttggcaacg ctggtttcat cccccacag 240  
 cctggtttcc ttaacgctct ccgcgacttg accaaacagg atggtgcgct cctgg 295

<210> 569  
 <211> 253  
 <212> DNA  
 <213> Zea mays  
 <400> 569  
 cccacgcgtc cgcccacgcg tccgctcccc tggcgtcccc aagggggcca cctacgagac 60  
 tttgacggca ccctacaatg atgtcgcggc agtgaagaaa ctgttcgagg acaacgcggg 120  
 ggagattgct gccgtcttcc tcgagccagt tgttggaac gctggtttca tccccacaca 180  
 gcctggtttc cttaacgctc tccgcgactt gaccaaacag gatggtgcgc tcctggtctt 240  
 cgatgaagtg atg 253

<210> 570

<211> 363  
 <212> DNA  
 <213> Zea mays

<400> 570

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ggtgcacggt agtgagtcgg aatcggctcg agtggcgatg gaaatctggg agctactgaa 60
agaattcttt gatgcagaaa ttagaaagct gaagctacaa ccatattatt tcgctattgt 120
tgttactgag aatgttctac agaaggaaaa ggaccacatt gagggctttg cacctgaggt 180
agcttggggt actaaatctg ggaaatctga cctggaagca ccgattgcaa gtgcgcccac 240
aggtgagctt gtaatgaacc cggctttctc catatggata agacgccacc gagacttacc 300
cttgaggtgt aatcaatggt gtcattgtgt tagatgggag tttagcgatc cgactccttt 360
cat 363
  
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<210> 571  
 <211> 312  
 <212> DNA  
 <213> Zea mays

<400> 571

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accacgcgtc cgcccacgcg tccgagaagc aggaattaga gttaaagtgg acgactcaga 60
gctgcgaact cctggatgga aattcaatca ctatgagatg aaaggggttc ctgtaagaat 120
atagataggt ccacgtgatg tcacaaataa gagtggtgtg gtttctagtc gtgatgtccc 180
tggaagcaa ggaaaggagt ttggagtgtc tatggagcct tcgatattgg tgaaccatat 240
aaatggtcgt ctagatgaca tacaagcatg ccttttacag aaggccttaa aatccgtgat 300
agtaacattg tc 312
  
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<210> 572  
 <211> 270  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 572

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ttaacttgca nngccaggtc aaggtctaga attcccaggc cgacctacga ctacacgtcg 60
gccacccgt ccggccaaga tggctcctga gggctaagaa aagctgtaca ccaaggtcaa 120
gagcattcac gacagcctga tcgaggctgg tgtccgcgtc gattccgact accgtgaggg 180
  
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ctactcccc ggatggaagt tcaacgactg ggagctcaag ggtaatcctc ttcttaacca 240  
attccgtccc aaggattccc aaaaagggtt 270

<210> 573  
<211> 427  
<212> DNA  
<213> Zea mays

<400> 573

cccacgcgtc cgcccacgcg tccgcccacg cgcccgccca cgcgtccgtg ggaaaatgtg 60  
gccagatgct tctgatactg atgcttcctc tcaactataag cttccgttct caagaactgt 120  
ctacattgag aaaactgatt ttgccttaa ggactcaaaa gactactatg ggctggcccc 180  
tggtaaatct gtcattgctaa ggtatgcgtt ccccataaaa tgcacagacg ttatctatgg 240  
tgatactcct gatgatattg ttgaaattcg agcagaatat gatcctttga agacttctaa 300  
acttaagggg gttctgcact ggggttgctga gccagcacct ggtgtcgaac cattgaaggt 360  
ggaagtaaga ctattcgaga aattgttcat gtcagagaat cctgctgaat tggaggattg 420  
gcttggt 427

<210> 574  
<211> 273  
<212> DNA  
<213> Zea mays

<400> 574

gttgaggaga gtggaaatct atgaattcag ccgattgaat atgggtttaca ctcttctaag 60  
caagcgaaag cttcttttgt ttgtacaaaa caagaagggtc gaagattgga cagacccacg 120  
ttttcccaact gtccaaggca tagtacgtcg gggcttgaag gttgatgcat tgatacagtt 180  
tataactcaa cagggtgctt caaaaaatct gaatctcatg gaatgggata aactctggac 240  
aatcaacaag aagataattg atccagtgtg cgc 273

<210> 575  
<211> 267  
<212> DNA  
<213> Zea mays

<400> 575

cccacgcgtc cggacggtat tgagtcaagg tgcagaaata ataccgtgga ggaaaatctc 60  
tcattatgga aagagatggt taatggaact gaaaggggca tgcagtgtctg tgtacgggggt 120  
aaacttgaca tgcaggatcc taacaagtca ctcagggatc ctgtttacta ccgctgtaat 180  
actgatccac accatcgtgt tggttcgaag tacaaggctt atccaacata tgactttgcg 240  
tgcccatttg tcgatgcatt ggagggg 267

<210> 576  
<211> 380  
<212> DNA  
<213> Zea mays

<400> 576  
cggacgcgtg ggctgctgaa ttggaagatt ggcttggcga tcttaaccca cactcgaaag 60  
aggtgataaa ggatgcttat gctgtaccat cacttgccac tgcggttctg ggtgacaagt 120  
tccagtttga gcggcttgggt tacttcgccg tggatactga ctccacacct gagaaactcg 180  
tgttcaacag aactgttacc ctccgtgatt cgttcgggaa agctggaccc aagtgactgt 240  
tcagtgtaat ttagggagggt cgctggtttt gatcggttgc agaagcgcac ctgaactata 300  
caagttgtga agaaaatggt cgtctaatac agaacagttt aaagggcctt actctttata 360  
aaatttaggg ttttttaaaa 380

<210> 577  
<211> 373  
<212> DNA  
<213> Zea mays

<400> 577  
actgtttaca cactcaatca atctgggatt tgagcggatc aggacacccg tgaaaattag 60  
ctctccaggt tggaagtatt ctactggga aatgaaaggt gttccattga gaattgagat 120  
tggtcaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 180  
ggttgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattca 240  
aaaaaatctg ttcaaacag ctcaagaaag gagagatgca tgtgttcagg tcgtcaactc 300  
ttgggatgaa ttcacaactg ctctgaataa caaaagggtg atcttggctc cttggtgcga 360  
tgaggaggaa gtt 373



<210> 578  
 <211> 299  
 <212> DNA  
 <213> Zea mays

<400> 578

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 aactgtttac aactcaatc aatctgggat tcgagcggat caggacaccc gtgaaaatta 120  
 ctctccaggt tggaagtatt ctactggga aatgaaagggt gttccattga gaattgagat 180  
 tgggtccaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 240  
 gggtgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattc 299

<210> 579  
 <211> 286  
 <212> DNA  
 <213> Zea mays

<400> 579

gccaatccag gtaattgtga ttccagtgcc ttataaggat gctgacacaa ctgccataaa 60  
 gggagcctgc gaatcaactg ttacacact cgatcaatct ggaattagag cggatcagga 120  
 caccctgtaa aattactctc cagggttgaa gtattccac tgggaaatga aagggtgttc 180  
 attgagaatt gagattgggtc caaaagatct ggcaaacaaa cagggtgcgtg ttgtccgccg 240  
 ggacaacggt gcaaagggtg acatccctgt gaccaatttg gttgaa 286

<210> 580  
 <211> 313  
 <212> DNA  
 <213> Zea mays

<400> 580

gatgacaaag gcttagtatt accaccaaag gtagcgccaa tccaggtaat tgtgattcca 60  
 gtgccttata aggatgctga cacaactgcc ataaaggag cctgcgaatc aactgtttac 120  
 aactcgatc aatctggaat tagagcggat caggacaccc gtgaaaatta ctctccaggt 180  
 tggaagtatt cccactggga aatgaaagggt gttccattga gaattgagat tgggtccaaaa 240  
 gatctggcaa acaaacaggt gcgtgttgtc cgccgggaca acggtgcaaa gggtgacatc 300

cctgtgacca att 313

<210> 581  
<211> 307  
<212> DNA  
<213> Zea mays

<400> 581

cccacgcgtc cgcacatggt gatgacaaag gcttagtatt accaccaaag gtagcgccaa 60  
tccaggtaat tgtgattcca gtgccttata aggatgctga cacaactgcc ataaaggag 120  
cctgcgaatc aactgtttac aactcgcgc aatctggaat tagagcggat caggacaccc 180  
gtgaaaatta ctctccaggt tggaagtatt cccactggga aatgaaagggt gttccattga 240  
gaattgagat tggtcacaaa gatctggcaa acaaacagggt gcgtgttgtc cgccgggaca 300  
acggtgc 307

<210> 582  
<211> 227  
<212> DNA  
<213> Zea mays

<400> 582

cccacgcgtc cggaaagggtg ttccattgag aattgagatt ggtccaaaag atctggcaaa 60  
caaacagggtg cgtgttgtcc gccgggacaa cggtgcaaag gttgacatcc ctgtgaccaa 120  
tttggttgaa gaggttaaag tggtactgga tgagattcaa aaaaatctgt tcaaacagc 180  
ccaagaaaag agagatgcct gtgttcatgt cgtgaacact tgggatg 227

<210> 583  
<211> 427  
<212> DNA  
<213> Zea mays

<400> 583

ggttgacaat attacatgtg caccgaccac aaaccaaata atcagcaaaa tggatttcga 60  
gtggcatctc aacatgcaca accttaggta aaagcttgag atggagaaac taaaagtttc 120  
caacagcgaa cacaagaggt ggctggggct ggcctaggag gggaggaaga agagtccat 180  
cacacgaaaa ccatgacctc acagcattgg tgcagtaaca ttctactatt tagagcctat 240

gatcaggctt taaagagtgg ctggggctgg cctaggaggg gaggaagaag agtgccatca 300  
ctaacaaaac agccctcga accatggttg ttttgcgacc tctaaagggtg gtaataacta 360  
acttgaaga aggaaaagta ctagaccttg atggcaaat gtggcctgat gcttctgata 420  
ctgatgc 427

<210> 584  
<211> 499  
<212> DNA  
<213> Zea mays

<400> 584  
tgggtagtgt aacatcacia tgctactgcc aactcatata ctaggactcg ttggctgcta 60  
caacactcta gattcactcg tattaaccga atctgtgagc catgtcgacc aacaagggca 120  
gcgcggccaa gggcggcgga gggaagaaga aggaggtgaa gaaggagacg aagctcggga 180  
tggcctataa gaaggacgac aacttcgggg agtggtactc cgaggttggt gttaacagtg 240  
aatgattga gtactatgac atttctggtt gttatatatt gaggccatgg gcgatggaaa 300  
tctgggagct actgaaagaa ttctttgatg cagaaattaa aaagctgaag ctcaaaccat 360  
attatttccc tttgtttggt actgagaatg ttctacagaa ggaaaaggac cacattgagg 420  
gctttgcacc tgaggtagct tgggttacta aatctgggaa atctgacctg gaagcaccga 480  
ttgcaatccg cccacaag 499

<210> 585  
<211> 284  
<212> DNA  
<213> Zea mays

<400> 585  
gacatttctg gttgttatat attgaggcca tgggcgatgg aaatctggga gctactgaaa 60  
gaattctttg atgcagaaat taaaaagctg aagctcaaac catattattt ccctttgttt 120  
gttactgaga atgttctaca gaaggaaaag gaccacattg agggctttgc acctgaggta 180  
gcttgggtta ctaaactctgg gaaatctgac ctggaagcac cgattgcaat ccgccccaca 240  
agtgagactg tcatgtatcc gtacttctcc aaatggataa gaag 284

<210> 586  
 <211> 271  
 <212> DNA  
 <213> Zea mays  
 <400> 586  
 ggaccgtggc ggtacgcgtg ggtttgtcga catatctgtc ccaaggaatg tcagcgcgtg 60  
 cgtctctgaa attggctccg agcgagtata caatgtcgac gacctgaaag aggtgggtgga 120  
 agccaacaag gaagaccgtc tcaggaaagc gatggaggca cagacaatca tcgccgaaga 180  
 gctgaaacgg tttgaggcgt ggcgggactc gctggagacc gttccaacca tcaagaagct 240  
 gaggtcttac gccgacagga tccgggcctc g 271

<210> 587  
 <211> 230  
 <212> DNA  
 <213> Zea mays  
 <400> 587  
 accatattga agaggctgct gtgcttagac ctgtaacaga atggaaatct atgtgggtggc 60  
 cctatcatgg aaccgaggta tcagggaagt cgtggactgg atgtcgaaga aaagtgggtat 120  
 tcttgcttct gagcttaggg aacacctatt catgctgcgt gacagtgatg ctacacgcca 180  
 tctgtttgag gtatcggctg ggttggactc tctggttctc ggtgaaggac 230

<210> 588  
 <211> 229  
 <212> DNA  
 <213> Zea mays  
 <400> 588  
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 tagtacctgt aatagaatgg aaatttatgt ggtggcgcta tcatggaacc gtggtatcag 120  
 agaagtagtg gactggatgt cgaagaaaag tggattccc gcttccgagc ttagggagca 180  
 cctgttcac ttgcgaacag tgatgccaca cgccatctgt ttgaggtgt 229

<210> 589  
 <211> 492  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 589

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gggagccacg cgtccggaag tgtaacgca ttaaaggta tacggtatca gtaaacctta 120
caagtgtgat gccaaaggaa aacggcatca gctgacacat tgctatatc ctgtttattt 180
cgtccgaata aagtatataa cttagaagag gggctcttgc cccacagcag ctcaagcaaa 240
aatgtacaaa gaaaagcagc tcgagtagag agaatttggc actctctcga cagattgagc 300
tgctgccatg gcgctaattc acgacacatt tgatgtctcg gcaagacggg gaggagctca 360
gtaagtgaga tgataaaaaa atagaatcag gttggagggt aagtatacac gggtagaaaa 420
attgcctcct tggccttaat tntgggtctt ctccaccttg gccttgatct tctgctcgat 480
gattgccttc tc 492

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<210> 590  
 <211> 313  
 <212> DNA  
 <213> Zea mays

<400> 590

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gtaaaccctt tttgaaaagg ctctgtcct aatacttgta taaaatgaaa attatgtgg 120
agccctatca tggaaccgaa gtatcagaga agtagttgac tggatgtcaa agaaaagtgg 180
tattcctgct tctgagctta aggagcacct attcatgctg cgtgacagt atgctacacg 240
ccatctgttc taagtatcag caaggttgga ctctttggtt ctcggtgaac gacaaatcct 300
tgctcaagtc aaa 313

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<210> 591  
 <211> 457  
 <212> DNA  
 <213> Zea mays

<400> 591

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cgaggaccct cgcaccaaga actgagcggg aagagaggta gagaggcaag cgcacgagag 120

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tttctgctcc tagtctcgtc tcgccccgcc tccgtctcct ttccctctct ggttctctct 180  
 ctgogattct cgtcgattg gttccgttcc ctacacgaaag gcggtagctt tctgtcttcc 240  
 ctgatctatc tagataatgg cgaccacgac gtcagcgacc accgccgcag cagcagccgc 300  
 caccatcgcc aagccgcggg ggtcgtcgtc ggacctctgc cagaggggtg cggcgggcgg 360  
 caggcgggtgc tccgggggtg tgccgtgcga cgccgccggc gtggaggccc aggcgcattgc 420  
 cgtggcaaat gcggccagcg tcgccgccct cgagcag 457

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 <212> DNA  
 <213> Zea mays

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 tgctgtgttc accagcaccg catctgaaac ttcattgttc gcaaaagaac acgcagagge 180  
 actccccct gtctctgata ctatgggagg tgttcgcctg tttgtcgaca tatctgtccc 240  
 caggaatgtc agcgcattgt tgtctga 267

<210> 593  
 <211> 264  
 <212> DNA  
 <213> Zea mays

<400> 593  
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 gaaaggggtg atgctattcg tgaggagatg aaagatatag agatcgtgta caggcctctc 120  
 tcagacatgt atcaagctgc tgctgaagct gatgtcgtgt tcaccagcac cgcattctgaa 180  
 acttcattgt tcgcaaaaga acacgcagag gcaactcccc ctgtctctga tactatggga 240  
 ggtgttcgcc tgtttgcga cata 264

<210> 594  
 <211> 310  
 <212> DNA  
 <213> Zea mays

<400> 594

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atgccatccg cgaggagatg aaaggatatcg agattgtgta caggcctctt tcagagatgt 120

acgaagctgc tgctgaagct gatgtcctat tcacgagcac tgcattctgaa accccattgt 180

tcacaaaaga gcacgcagag gcacttccca caatttccga tgccatggat ggtgcccggc 240

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cgcgagtata 310

<210> 595

<211> 290

<212> DNA

<213> Zea mays

<400> 595

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attgtgtaca ggcctctctc ggagatgtat gaagctgctg ctgaagctga cgtcgtgttc 120

acgagcaccg catctgaaac ccattgttc acaaaagagc acgcagatgc acttcccact 180

gtttctgatg ccatgggcgg tgtccggctc tttgtcgaca tatctgtccc aaggaatgtc 240

agcgcgtgtg tctctgaaat tggctccgcg cgagtgtaca atgttgatga 290

<210> 596

<211> 168

<212> DNA

<213> Zea mays

<400> 596

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tatcgagatt gtgtacaggc ctctttcaga gatgtacgaa gctgctgctg aagctgatgt 120

cctattcacg agcactgcat ctgaaacccc attgttcaca aaagagca 168

<210> 597

<211> 254

<212> DNA

<213> Zea mays

<400> 597

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agacaatcat cgccgaagag ctgaaacggt ttgaggcgtg gcgggactcg ctggagaccg 120  
ttccaaccat caagaagctg aggtcttacg ccgacaggat ccgggcctcg gagctcgaga 180  
agtgcctgca gaagatcggg gacgacgctc tcaccaagaa gacgaggaga gccatcgagg 240  
agctaagcac cggc 254

<210> 598  
<211> 270  
<212> DNA  
<213> Zea mays

<400> 598  
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ggcgcagaca atcatcaccg aagagctgaa acggtttgag gcatggcggg actcgctgga 120  
gaccgttcca accatcaaga agctgaggtc atatgccgac aggatccgag cctcagagct 180  
cgatgagtgc ctacagaaga tcggggatga cgttctcacc aagaagatga ggagagccat 240  
cgaggagcta agcaccggca tcgtgaacaa 270

<210> 599  
<211> 422  
<212> DNA  
<213> Zea mays

<400> 599  
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gcctgcagaa agtaggtgag gacgccctca ccaagaagat gaggagagcc atcgaggagc 120  
tgagcaccgg catcgttaac aagctcctcc atggcccgtc gcagcacctg aggtgcgacg 180  
gcagcgacag ccgcaccctt gacgagacgc tcgagaacat gcacgccctc aaccggatgt 240  
tcagcctcga catggagaag gcgatcatcg agcagaagat caaggccaag gtggagaaga 300  
cacaaaactg aggccaggaa gcaatttttc taccaccatt atctatatat atagcgtctc 360  
caatctcatt ccattttttt atcctttcac tcagttagcc cttcccctgc tctgtgtgat 420  
cg 422

<210> 600



<211> 282  
 <212> DNA  
 <213> Zea mays  
  
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 accaagaaga tgaggagagc catcgaggag ctgagcaccg gcatcgttaa caagctcctc 120  
 catggcccg c tgcagcacct gaggtgcgac ggcagcgaca gccgcaccct tgacgagacg 180  
 ctcgagaaca tgcacgctct caaccggatg ttcagcctcg acatggagaa ggcgatcatc 240  
 gagcagaaga tcaaggccaa ggtggagaag acacaaaact ga 282

<210> 601  
 <211> 262  
 <212> DNA  
 <213> Zea mays  
  
 <400> 601  
  
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 caagctcctc cacggcccg c tgcagcacct gaggtgcgac ggtagtaaca gccgcaccct 120  
 tgatgagacg ctcgagaaca tgcacgctct caaccggatg ttcagcctcg acacggagaa 180  
 ggcgatcatc gagcagaaga tcaaggccaa ggtggagaag acccagaatt gaggcctgga 240  
 gtcaatTTTT ctaccgtgt at 262

<210> 602  
 <211> 288  
 <212> DNA  
 <213> Zea mays  
  
 <400> 602  
  
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 aagctcctcc atggcccgct gcagcacctg atgctggacg gcagcgacag ccgcaccctt 120  
 gacgagacgc tcgagaacat gcacgccctc aaccggatgt tcagcctcga catggagaag 180  
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 gcaatTTTT taccaccatt atctatatat atagcgtctc caatctca 288

<210> 603

<211> 139  
 <212> DNA  
 <213> Zea mays  
 <400> 603  
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 caatTTTTtct accaccatta tctatatata tagcgtctcc aatctcattc catttttttta 120  
 tccttttact cagtgagcc 139

<210> 604  
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 <212> DNA  
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 tcatcttgcg aagcagtgat gccacacgcc atctgtttga ggtgtcagct ggccttgact 120  
 ctttggttct cgtgaagga caaatccttg ctcagggttaa acaagttgtg aggagtggac 180  
 agaacagtgg aggcttggga aagaacattg ataggatggt caaggatgca atcactgctg 240  
 gaaagcgtgt ccgctgcgag accaacatat catctgggtgc tgtttctgtc agttcagcgg 300  
 cggttgaact ggccctgatg aagcttccga agtctgaagc actgtcagct aggatgcttc 360  
 tgattggtgc tggtaaaatg ggaaagctag tgatcaaaca tctggttgcc aaaggatgca 420  
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<210> 605  
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 <212> DNA  
 <213> Zea mays  
 <400> 605  
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 tcaaggatgc aatcactgct ggaaagcgtg tccgcagcga gaccaacata tcatctggtg 120  
 ctgtttctgt cagttcagcg gcggttgaac tggccctgat gaagcttccg aagtctgaag 180  
 cactgtcagc taggatgctt ctgattggtg ctggtaaaat gggaaagcta gtgatcaaac 240  
 atctgggtgc caaaggatgc aagaaggttg ttgtggtgaa ccgctccgtg gaaaggggtg 300

atgctattcg tgaggagatg aa

322

<210> 606

<211> 310

<212> DNA

<213> Zea mays

<400> 606

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tctgtttgag gtgtcagctg gccttgactc tttggttctc ggtgaaggac aaatccttgc 120

tcagggttaaa caagttgtga ggagtggaca gaacagtgga ggcttgggaa agaacattga 180

taggatgttc aaggatgcaa tctctgctgg aaagcgtgtc cgctgcgaga ccaacatatc 240

atctggtgct gtttctgtca gttcagcggc ggttgaactg gccctgatga agcttccgaa 300

gtctgaagca 310

<210> 607

<211> 298

<212> DNA

<213> Zea mays

<400> 607

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gcttgggaaa gaacatcgat aggatgttca aggatgcaat cactgctgga aagcgtgtcc 120

gcagcgagac caacatatca tctggtgctg tttctgtcag ttcagcggcg gttgaactgg 180

ccctgatgaa gcttccgaag tctgaagcac tgtcagctag gatgcttctg attggtgctg 240

gtaaaatggg aaagctagtg atcaaacatc tggttgccaa aggatgcaag aaggttgt 298

<210> 608

<211> 300

<212> DNA

<213> Zea mays

<400> 608

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ttgaactggc cctgatgaag cttccgaagt ctgaagcact gtcagctagg atgcttctga 120

ttggtgctgg taaaatggga aagctagtga tcaaacatct ggttgcgaaa ggatgcaaga 180

aggttgttgt ggtgaaccgc tccgtggaaa ggggtggatgc tattcgtgag gagatgaaag 240  
 atatagagat cgtgtacagg cctctctcag acatgtatca agctgctgct gaagctgatg 300

<210> 609  
 <211> 234  
 <212> DNA  
 <213> Zea mays

<400> 609

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 attggtgctg gtaaaatggg aaagctagtg atcaaacatc tggttgcaa aggatgcaag 120  
 aaggttgttg tggatgaaccg ctccgtggaa aggggtggatg ctattcgtga ggagatgaaa 180  
 gatatataga tcgtgtacag gcctctctca gacatgtatc aagctgctgc tgaa 234

<210> 610  
 <211> 278  
 <212> DNA  
 <213> Zea mays

<400> 610

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 cctgatctgc aagtccgtcg cgatgcgaca tcgacgcacc tgggagcggg catgagagga 120  
 gaagctcaag gcgttcgagc tcgcactggc gacggcagac gccacgttct agaacctcga 180  
 ctcgctcgag atctcactga cggacgtgag ccactacttc gactcggacc cgatcaagct 240  
 cgtgcattgg ctgctcaaag acgggcgagc ggcgtcct 278

<210> 611  
 <211> 251  
 <212> DNA  
 <213> Zea mays

<400> 611

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 atcactgagg cttcgcgcgg cgccatcacc gccttcgttg agaagaccac aaacagcaaa 120  
 gggcaagtcg tcaatgttac caacaacctc agcaagatac ttggtttcgg tctgtcggaa 180  
 ccatgggtgc agtacctgtc cacgaccaag ttcgtcagag cggacagaga gaagatgagg 240

gttctgtttg g 251

<210> 612  
<211> 126  
<212> DNA  
<213> Zea mays

<400> 612

gttctagatc gccagtctct tctcctcctt agttttcctc ttcagttctg cccatctgat 60  
ggctctagtg cagagctgct ccactctctt gtgcaatgca tgtgacttcc ctgtcctggg 120  
gtcccg 126

<210> 613  
<211> 296  
<212> DNA  
<213> Zea mays

<400> 613

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gccttgatcat cgaactgaga caagtgtatc cacgggattt gccaggaaa ttgcaagggt 120  
tgcccagggg aaatattatt acctccctaa tgcttcagat gctgtaattt ctgctgactc 180  
caagaccgcc ctgacagact tgaagagctc atgattttgc agcagcggca cccgttttct 240  
gtaccttttg atagggatgg tgaaccttca ttcatgcagt aatttttgcg taggcc 296

<210> 614  
<211> 286  
<212> DNA  
<213> Zea mays

<400> 614

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atgaccgcgt tgaagcagtg gatattgcaa cacggtttca ggagtctagc aaagaagttt 120  
tcaaattggg ggaagaaaaa actgaaactg caaaaactca gataattttt gcaagagagt 180  
atctgaagga tggttactatt agcacagagc agctcaaata tcttgtcatg gaagctatac 240  
gaggtggctg tcaggggcat cgtgctgagt tgtatgctgc ccgagt 286

<210> 615

<211> 239  
 <212> DNA  
 <213> Zea mays

<400> 615

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 ggagaggcag acggctgaca atggcggcaa gtaccctgag acggtcgcac ttgtcctgtg 120  
 gggcaccgac aacatcaaga cctatggtga gtcactagcc cagggtgctgt ggatgattgg 180  
 agttcggcca gttgccgaca ccttcggccg tgtcaaccgt gtggagcctg tcagccttg 239

<210> 616  
 <211> 233  
 <212> DNA  
 <213> Zea mays

<400> 616

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 agacatcgga ggagaacctg gacaggctca gggagctcta ctggaggtt gaagacaaga 120  
 ttgaggggat tgaccggtaa accgatttgc cagattcaaa ggaatgagaa gcttgggaact 180  
 cttgtgtctc attgaggctc ttgtacaatg tgtgtgtagc ttatatatat ata 233

<210> 617  
 <211> 302  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 617

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 gtatcatgac gatcangaga atctccagca gcagatatca tctgcacgga gtaaccttgg 120  
 cgctgtgcag attgaccatg acctccgtgt caagatatcc aagggtgtgt ctgagttgaa 180  
 cgttgatgga ctgagagggtg acattgtgac taacatggct gccaaaggcg tggctgctgt 240  
 gaaaagaatg gacagcgtca ccgtggagga cattgctact gtcattccca actgcttgag 300  
 gc 302

<210> 618  
 <211> 261

<212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <400> 618  
  
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 gaagcttgcc ctcgagggaa gctacgtcga gcctngccct ngcggcganc cgatncgtan 120  
 cncnaagngc tcccgcacagg gnagancatc canntctcga tncgcagggt atcnaaaca 180  
 aagctncctt tnaagaancc aaaatngnnn gtggncnggt tncttggagn ngtgaaggnt 240  
 ggaanatgng gaaantaccc g 261

<210> 619  
 <211> 262  
 <212> DNA  
 <213> Zea mays  
  
 <400> 619  
  
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 acgtgaaaaa gtatttgtgg atgacctcaa gaaagctgta gagctgggtca ttctacctcg 120  
 ctccatccta tctgataatc cacaggatca gcagcaagag catccacccc caccctcgcc 180  
 gccaccacct ccagaaaatc aagattcttc agaagaccaa gatgaggaag acgaagacca 240  
 agaggatgat gaagaagaaa at 262

<210> 620  
 <211> 125  
 <212> DNA  
 <213> Zea mays  
  
 <223> unsure at all n locations  
 <400> 620  
  
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 ctggtacntg cctgccctca aaggcgccgg catcaagtac gacgaccccc gtgctctacc 120  
 tcgac 125

<210> 621  
 <211> 280  
 <212> DNA  
 <213> Zea mays

<400> 621

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gctgccacca agaccgcctt gacagacttg aagagctcat gattttgcag cagcggcacc 120  
cgttttctgt accttttgat agggatggtg aaccttcatt catgcagtaa tttttgcgta 180  
ggcctctaca atgacagggg gaaacaaacc cgagcatggc atcgtgtaaa gtgttaaggt 240  
ccaatggcct cctgtccacg tttggcgatg taaatcctcc 280

<210> 622

<211> 274

<212> DNA

<213> Zea mays

<400> 622

cagtaaggag gtttagctgtt gatgccacgc ttagagcagc tgcaccatac caaaaactgc 60  
gcagagagaa agaacgtgac aaaacaagaa aggttttcgt tgaaaagact gacatgagag 120  
ccaaaagaat ggctcgaaaa gcagggtgctc tagtcatatt tgttgtggac gctagtggta 180  
gcatggctct gaatcgatg cagaatgcta aagggtcggc gttgaagttg cttgcagaaa 240  
gctacaccag cagagatcag gtttcaatta ttcc 274

<210> 623

<211> 252

<212> DNA

<213> Zea mays

<400> 623

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agctgcacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaagggtttt 120  
tgttgaaaag actgacatga gagccaaaag aatggctcga aaagcaggtg ctctagtcac 180  
atgtgtgtg gacgctagt gtagcatggc tctgaatcgt atgcagaatg ctaaagggtgc 240  
ggcgttgaag tt 252

<210> 624

<211> 252

<212> DNA

<213> Zea mays



<400> 624

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agctccacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaagggtttt 120  
tgttgaaaag actgacatga gagccaaaag aatgggtcga aaagcaggtg ctctagtcac 180  
atgtgtgtg gacgctagtg gtagcatggc tctgaatcgt atgcagaatg ctaaagggtg 240  
ggcgttgaag tt 252

<210> 625

<211> 260

<212> DNA

<213> Zea mays

<400> 625

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gacatgagac ccaaagaat ggctcgaaaa gcagggtgctc tagtcatatt tgtttagac 120  
gctagtagta gcatggctct gaatcgtatg cagaatgcta aagggtgcggc gttgaagttg 180  
cttgagaaa gctacaccag cagagatcag gtttcaatat tccttttcgt ggagattatc 240  
tgagggttgc tccaccatca 260

<210> 626

<211> 260

<212> DNA

<213> Zea mays

<400> 626

caacccatca gaggccacgg tggccaagcg ccggagctac gcgaacacca tcagctacct 60  
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ctcttctac cagtctctca aggacaccg gcgtggctct cagattgtga gctccatcgt 180  
cagcactgca aagcagtgca acctcgacaa ggatgtcccg ctgcccagg aaggggagga 240  
gtcccaccaa aggagcgtga 260

<210> 627

<211> 122

<212> DNA

<213> Zea mays

<400> 627

caaggacacc gggcgtggtc ctcagattgt gagctccatc gtcagcactg caaagcatgc 60  
aacctcgaca aggatgtccc cctgcctgag gaaggggagg agctcccacc aaaggagcgt 120  
ga 122

<210> 628

<211> 306

<212> DNA

<213> Zea mays

<400> 628

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tccatatccc accctgctcg cttcatcctc atcggtcttg gtaaccgga ggaaggggag 120  
ctcaggcccc agctgctgga ccgggttcggg atgcacgcgc aggttggtac cgtcagggac 180  
gccgagctca gggatgaagat cgtggaggag agggctcggt tcgacaggga tccgaagacg 240  
ttccgtgagt cgtatcatga cgagcaggag aagctccagc agcagatatc atctgcacgg 300  
agtaac 306

<210> 629

<211> 269

<212> DNA

<213> Zea mays

<400> 629

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gtatctccat atcccaccct gctcgcttca tctcatcgg ctctggtaac ccggggaagg 120  
ggagctcagg cccagctgc tggaccggtt cgggatgcac gcgcaggttg gtaccgtcag 180  
ggacgccgag ctcagggtga agatcgtgga ggagagggct cgtttcgaca gggatccgaa 240  
gacgttccgt gagtcgacca tgacgagca 269

<210> 630

<211> 269

<212> DNA

<213> Zea mays

<400> 630

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aggggtgaaga tcgtggagga gagggtctgt ttcgacaggg atccgaagac gttccgtgag 180  
tcgtaccatg acgagcagga gaagtccagc agcagatatc atctgcacgg ataacttggc 240  
gctgtgcaga ttgaccatga ctccgtgtc 269

<210> 631  
<211> 433  
<212> DNA  
<213> Zea mays  
<400> 631

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cgaccccagag gtcattgggccc ccgaggtccg ccagcggggtc ctgcaggggg acaccggcct 120  
ccccgtcacc accgccaaga tcaccatggt cgacctgccc ctccggcgcca ccgaggaccg 180  
cgtctgcggc accattgaca tcgagaaggc gctcaccgag ggcgtcaagg cgttcgagcc 240  
cggcctgctc gccaaaggcca acaggggcat actgtacgtc gacgaggta acctgctgga 300  
cgaccacctc gtcgacgtgc tgctggattc cgctgcgtcg ggggtggaaca cgggtggagag 360  
ggaggggtatc tccatatccc accctgctcg cttcatcctc atcgggtctg gtaacccgga 420  
ggaaggggag etc 433

<210> 632  
<211> 281  
<212> DNA  
<213> Zea mays  
<400> 632

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gtcgtcgtcg gcgacccctt caactccgac ccgacgacc ccgaggtcat gggccccgag 120  
gtccgccagc gggctctgca gggggacacc ggcctccccg tcaccaccgc caagatcacc 180  
atggctgacc tgcccctcgg cgccaccgag gaccgctct ggggcaccat tgacatcgag 240  
aaggcgctca ccgagggcgt caaggcgttc gagccccgcc t 281

<210> 633  
 <211> 273  
 <212> DNA  
 <213> Zea mays  
  
 <400> 633  
  
 tgcccctcgg cgccaccgag gaccgcgtct gcggcaccat tgacatcgag aaggcgctca 60  
 ccgagggcgt caaggcggtc gagcccggcc tgctcgccaa ggccaacagg ggcatactgt 120  
 acgtcgacga ggtcaacctg ctggacgacc acctcgtcga cgtgctgctg gattccgctg 180  
 cgtcgggggtg gaacacggtg gagagggagg gtatctccat atcccaccct gctcgcttca 240  
 tcctcatcgg ctctggtaac ccggaggaag ggg 273

<210> 634  
 <211> 227  
 <212> DNA  
 <213> Zea mays  
  
 <400> 634  
  
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 ccctcgtcga cctgctcccg gacatccgcg tcgtcgtcgg cgacccttc aactccgacc 120  
 cggacgaccc cgaggtcatg ggccccgagg tccgccagcg ggtcctgcag ggggacaccg 180  
 gcctccccgt caccaccgcc aagatcacca tggtcgacct gccctc 227

<210> 635  
 <211> 372  
 <212> DNA  
 <213> Zea mays  
  
 <400> 635  
  
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 gcctgtcggg accatgggtg cagtacctgt ccacgaccaa gttcgtcaga gcggacagag 120  
 agaagatgag ggttctgttt gggttcttgg gggagtgcct gaggctcgtc gtgcaagaca 180  
 acgagctggg aagcttgaag cttgccctcg aggggaagcta cgtcgagcct ggccctggcg 240  
 gcgacccgat ccgtaaccgg aagggtgctc cgacagggaa gaacatccac gctctcgatc 300  
 cgcaggccat cccaaccacg gctgccttga agagcgccaa gatcgtcgtg taccgtctcc 360  
 tggagaggca ga 372

<210> 636

<211> 263

<212> DNA

<213> Zea mays

<400> 636

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gacggtcgtc gtgcaagaca acgagctggg aagcttgaag cttgccctcg aggggaagcta 120
cgtcgagcct ggccctggcg gcgacccgat ccgtaaccgg aagggtgctcc cgacagggaa 180
gaacatccac gctctcgatc cgcaggccat cccaaccacg gctgccttga agagcgccaa 240
gatcgtcgtg gaccgtctcc tgg 263
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<210> 637

<211> 272

<212> DNA

<213> Zea mays

<400> 637

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cccacgcgtc cggttgccaa caacctcagc aagatacttg gtttcggcct gtcggaacca 60
tgggtgcagt acctgtccac gaccaagttc gtcagagcgg acagagagaa gatgaggggt 120
ctgtttgggt tcttggggga gtgcctgatg ctcgtcgtgc aagacaacga gctgggaagc 180
ttgaagcttg ccctcgaggg aagctacgtc gagcctggcc ctggcggcga cccgatccgt 240
aaccgaagg tgctcccgac agggaagaac at 272
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<210> 638

<211> 273

<212> DNA

<213> Zea mays

<223> unsure at all n locations

<400> 638

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gaatcttgcc ctcgagggaa gctacgtcga gcctggccct ggcggcgacc cgattncgta 120
accgaaggt gctcccgaca ggaagaacat ctangctctt nnatccgcan gccatcccaa 180
ccacggctgc cttgaagagc gncaagatcg tcgtggaccg tctcctggag aggcagaagg 240
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ctgacaatgg nggcaagtac cctgagacgg tcg

273

<210> 639  
<211> 301  
<212> DNA  
<213> Zea mays

<400> 639

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cataagcaat ctacttctga atgtcttgac ggagggagtt aacattgtgg aaagagaggg 120  
cattagcttt cgccatccct gcaaaccact tctaattgct acttacaatc cagaggaagg 180  
gtctgtacgt gaacacttgc ttgatcgat tgcaattaat ttaagtgtg atcttccaat 240  
gagttttgat gaccgcgttg aagcagtggg tattgcaaca cggtttcagg agtctagcaa 300  
a 301

<210> 640  
<211> 307  
<212> DNA  
<213> Zea mays

<400> 640

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aatgtcttga cggagggagt taacattgtg gaaagagagg gcattagctt tcgccatccc 120  
tgcaaaccac ttctaattgc tacttacaat ccagaggaag gatctgtacg tgaacacttg 180  
cttgatcgta ttgcagttaa ttttaagtgt gatcttccaa tgagttttga tgaccgcgtt 240  
gaagcagtgg atattgcaac acggtttcag gagtctaggg aagaagtttt caaattgggtg 300  
gaagaaa 307

<210> 641  
<211> 278  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
<400> 641

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ggagggagtt aacattgtgg aaagagaggg gattagcttt cgccatccct gcaaaccact 120

tctaattgct acttacaatc cagaggaagg atctgtacgt gaacactctg ctgatcgtat 180  
 tgcattaatt aagtgtctgat cagcaatgag tttgatgacg cgttgaacat ggatatcaca 240  
 ccggttcaga gctacaagaa tttcaatcgt ggagaaaa 278

<210> 642  
 <211> 426  
 <212> DNA  
 <213> Zea mays

<400> 642  
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 actcgtccaa cgtgaacctg gccgtggaga acgcgtcatg gaccgacgag aagcagctcc 120  
 aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgccccca ggggcaggca 180  
 tgaaggagaa gcgcaaggcg ttcgagctcg ccctggcgac ggcgagcgcc acgttccaga 240  
 acctcgactc gtcggagatc tcgctgacgg acgtgagcca ctacttcgac tcggacccga 300  
 ccaagctcgt gcaggggctg cgcaaggacg ggcgggcgcc gtcctcgtac atagccgaca 360  
 ccaccacggc gaacgcccag gtgaggacgc tgtcggagac ggtgcgcctc gacgcgagga 420  
 ccaagc 426

<210> 643  
 <211> 312  
 <212> DNA  
 <213> Zea mays

<400> 643  
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 gtccaacgtg aacctggccg tggagaacgc gtcatggacc gacgagaagc agctccagga 120  
 catgtacctg acccgcaagt ccttcgcgtt cgacagcgac gcccagggg caggcatgaa 180  
 ggagaagcgc aaggcgcttcg acctcgccct ggcgacggcg gacgccacgt tccagaacct 240  
 cgactcgtcg gagatctcgc tgacggacgt gagccactac ttcgactcgg acccgaccaa 300  
 gctcgtgcag gg 312

<210> 644  
 <211> 287

<212> DNA  
 <213> Zea mays  
 <400> 644  
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 gtcggagacg gtgcgcctcg acgcgaggac caagctgctg aacccaagt ggtacgaggg 180  
 gatgatgaag agcgggtacg aggggggtcag ggagatcgag aagcgggtca ccaacaccgt 240  
 cgggtggagc gccacgtctg ggcagggtcga caactgggtc tacgagg 287

<210> 645  
 <211> 279  
 <212> DNA  
 <213> Zea mays  
 <400> 645  
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 ctcgctggag atctcgctga cggacgtgag ccactacttc gactcggacc cgaccaagct 180  
 cgtgcagggg ctgcgcaagg acggggcggc gccgtcctcg tacatagccg acaccaccac 240  
 ggcgaacgcc aggtgaggac gctgtcggag acggtgcgc 279

<210> 646  
 <211> 280  
 <212> DNA  
 <213> Zea mays  
 <400> 646  
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 taggcggagg agctcggcgt gtcgctaagg gaagcggcga caaggggtgtt ctcgaaacgca 120  
 tcaggctcct actcgtccaa cgtgaacctg gcggtggaga acgcgtcatg gaccgacgat 180  
 aagcagctcc aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgccctt 240  
 ggggcaggca tgaaggagaa gcgcaaggcg ttcgagctcg 280

<210> 647  
 <211> 213



<212> DNA  
 <213> Zea mays  
  
 <400> 647  
  
 ggcgacggcg gacgccacgt tccagaacct cgactcgtcg gagatctcga tgacggacgt 60  
 gagccactac ttcgactcgg acccgaccaa gctcgtgcag gggctgcgca aggacgggcg 120  
 ggcgccgtcc tcgtacatag ccgacaccac cacggcgaac gccaggtga ggacgctgtc 180  
 ggagacgggtg cgctcgcacg cgaggaccaa gct 213

<210> 648  
 <211> 166  
 <212> DNA  
 <213> Zea mays  
  
 <400> 648  
  
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 gtgttctcga acgcatcagg ctctactcgc tccaacgtga acctgacggt ggagaacgcg 120  
 tcatggaccg acgagaagca gctccaggac atgtacctga gccgca 166

<210> 649  
 <211> 449  
 <212> DNA  
 <213> Zea mays  
  
 <400> 649  
  
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 cgtcgggtgg agcgccacgt ctgggcaggt cgacaactgg gtctacgagg aggccaactc 120  
 cacgttcacg gaggacgagg cgatgaggaa gaggtcatg gacaccaacc ccaattcggt 180  
 caggaagttg gtgcagacct tcctggaagc cagtggcaga ggctactggg agacaacgga 240  
 ggagaacctg gacaggctca gggagctcta ttcggagggt gaagacaaga ttgaggggat 300  
 tgacaggtaa attgatttgc cagatcggtc ggccgatcgg ttccagcatt caaccataa 360  
 cgagcttgga actcttctgc ctcatggga ctcttgta atgtctgggt gtgtgattta 420  
 tatatatata aaagtgtaac atgtaatac 449

<210> 650  
 <211> 305

<212> DNA  
 <213> Zea mays  
 <400> 650  
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 ggtctacgag gaggccaact ccacgttcat cgaggacgag gcgatgagga agaggctcat 120  
 ggacaccaac cccaattcgt tcaggaagtt ggtgcagacc ttcctggaag ccagtggcag 180  
 aggctactgg gagacaacgg aggagaacct ggacaggctc agggagctct attcggaggt 240  
 tgaagacaag attgagggga ttgacaggta aattgatttg ccagatcggt cggccgatcg 300  
 gttcc 305

<210> 651  
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 <212> DNA  
 <213> Zea mays  
 <400> 651  
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 gggcaggtcg acaactgggt ctacgaggag gccaaactcca cgttcatcga ggacgaggcg 180  
 atgaggaaga ggctcatgga caccaacccc aattcgttca ggaagtgggt gcagaccttc 240  
 ctggaagcca gtggcagagg ctactgggag 270

<210> 652  
 <211> 440  
 <212> DNA  
 <213> Zea mays  
 <223> unsure at all n locations  
 <400> 652  
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 acgtcctact aggacgaggc gatgaggaag aggctcatgg acaccaacce caattcgttc 120  
 aggaagttgg tgcagacctt cctggaagcc agtggcagag gctactggga gacaacggag 180  
 gagaacctgg acaggctcag ggagctctat tcggaggttg aagacaagat tgaggggatt 240  
 gacaggtaaa ttgatttgcc agatcggctg gccgatcggt tccagcattc aacccataac 300

gagcttgga ctcttctgcc tcattgggac tcttgtacaa tgtctgggtg tgtgatttat 360  
 atatataaa aaagtgtgaa catgtaatac tggaggatac aatatttaac anagaggggtg 420  
 gcggttggtc catccaaaac 440

<210> 653  
 <211> 213  
 <212> DNA  
 <213> Zea mays

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 aaaattcata tcagaagtga gagcaccaaa aagtaaggaa ggttatgcat ccataggttg 120  
 cggttctctt ctacgacaaa ttactgatgc acaggctgaa gcactgaggg aggcattaca 180  
 tgggaaagat gccctgccaa cgtgtatggt gga 213

<210> 654  
 <211> 261  
 <212> DNA  
 <213> Zea mays

<400> 654

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 gcattcgtgt tctccaagac attgtcaagg aagattcata tttttctggg ttgccaattt 180  
 ccattattga atcatggtac caacgagatg gctatgtgaa atcaatgtct gacctaatg 240  
 aaaaggagct ctcggccttc t 261

<210> 655  
 <211> 291  
 <212> DNA  
 <213> Zea mays

<400> 655

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 ttcaatggct gaagccatat actgatgaag ttttagtaga aattgggtcag aacgggtgtga 120  
 agagcctcct ggctgttcca gtaagcttcg tgagcgagca cattgagaca ctggaagaaa 180

tagacatgga gtacaaggag ttggctctgg aatcaggcat tgagaactgg ggccgggtcc 240  
ctgctcttgg atgcacttcg acgttcatct cggacttgca gatgcggttg t 291

<210> 656  
<211> 275  
<212> DNA  
<213> Zea mays

<400> 656  
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ggctctcctg gtgctggaag tgaccaacgg cgaagggttc ctgcatcaat ggggaatcct 180  
gcctctgttc cgctgagccg acaattctgt tcatgatggg gtcataattt tgctgcagcc 240  
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<210> 657  
<211> 261  
<212> DNA  
<213> Zea mays

<223> unsure at all n locations  
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cctactggct gttacagtaa gccttgagag taaagacatc gagacattgg aagaaattga 180  
catggagtac aaggagttgg ctctggaatc aggcatacag aactggggtc gggttcctgc 240  
tctgatnnac acttcaacat t 261

<210> 658  
<211> 398  
<212> DNA  
<213> Zea mays

<400> 658  
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actcacacct cactttttct gctaaattgt ggcagtgggtg ataattgata tgcatagact 120  
gtacttattt aatgactatg aaataccatt taacatagct attgtgcctg acagggtaaa 180

tctaccaagg acacacatag ttaagccttg ctcagctgac gactgctaag gaatttctgt 240  
 taagtgcagt ttgggggggtc ttctcaacca ttgcttgact taaggcaaca cattagagga 300  
 tattcatcag catcagaggc aattcttccc aatctgattt gagaaaaaaa tttgttggca 360  
 acgaaaaatt agtgttttct tgctgaatct tgggggggc 398

<210> 659  
 <211> 356  
 <212> DNA  
 <213> Zea mays

<400> 659

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 caggtaaatg ctattaaaat ttggtaggta attgtttcac taacaacgga gttgtgccct 120  
 tatgttttaa tgatcacctt gtaagaacac taggaatgga aactgccaag ttatataggc 180  
 ttcaggagtt accagttcct taattttcca ggtcaccatt aactagtgtt aacatttatt 240  
 gtacacgcag agtcgggttg ggccagttca atggctgaag ccatatactg atgaagtttt 300  
 agtagaactt ggtcaaaagg gtgttaagag cctcctggct gttccagtaa gctttg 356

<210> 660  
 <211> 266  
 <212> DNA  
 <213> Zea mays

<400> 660

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 cctctatacc ctcagttctc catatcaact agtgggtcaa gtctccgttt attggagagc 180  
 atattcagag aggatgagta tctcgtgaat atgcaacata cagttatacc ttcctggtag 240  
 caacgtgaag gatatatcaa ggctat 266

<210> 661  
 <211> 260  
 <212> DNA  
 <213> Zea mays

<400> 661

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 gccaacgtgt atgttggaat gcggtattgg catccctatc actgaagaag ccatagaaca 120  
 aacaaaacgg gatgcaatca cgaaacttgt tgtgttgctt ctataccctc agttctccat 180  
 atcaactagt ggttcaagtc tccgtttatt ggagagcata ttcagagagg atgagtatct 240  
 cgtgaatatg caacatacag 260

<210> 662  
 <211> 195  
 <212> DNA  
 <213> Zea mays

<400> 662

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 aacttgttgt gttgcctcta taccctcagt tctccatata aactagtggg tcaagtctcc 120  
 gtttattgga gagcatattc agagaggatg agtatctcgt gaatatgcaa catacagtta 180  
 taccttctctg gtacc 195

<210> 663  
 <211> 430  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 663

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 aacctccaca agttttactg gttctaccac caaacatgag cagagcttgc atggaaatgt 120  
 taagccgttg caattggcgg caaatgaatc ctctcgtttg gcttacagaa gtccagcact 180  
 taaaaaccag tggaatcttc ctgctagttc ttccctccact aatgtgggta ccacctttga 240  
 tgataacgaa cacgtgtctt ccagtgttat tgaagaaaaa gttggagtac tgttattaaa 300  
 ccttggtggg ccagagacac ttgacgatgt tcaaccattt ttattcaacc tatttgctga 360  
 tccagatata attcgactcc ctangctctt caagtttctt cnaagacact gggcaaacnt 420  
 ntattttaatt 430

<210> 664

<211> 199  
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 <213> Zea mays

<400> 664

aaacaacctc cacaagtttt actggttcta ccaccaaaaca tgagcagagc ttgcatggaa 60  
 atgttaagcc gttgcaattg gcggcfaatg aatcctctcg tttggcttac agaagtccag 120  
 cacttaaaaa ccagtggat cttcctgcta gttcttcctc cactaatgtg gttaccacct 180  
 ttgatgataa cgaacacgt 199

<210> 665  
 <211> 443  
 <212> DNA  
 <213> Zea mays

<400> 665

gccacgtttg gtagttgcta cttgctacac cggaggaaga agaacaagta gtgcttttct 60  
 tctcttgta cgttcacggg gcggccgac gaccgttcac ctgccccgac ggccaagca 120  
 gccatgtct tcgtcgggcc cctccccggc gacgggaatc cacgcgtcgc cgccgttggg 180  
 ccttttgccg gcgacgggaa cccatcacac cagggtcatgg ggcaaaacaa cctccacaag 240  
 ttttactggt tctaccacca aacatgagca gagcttgcat ggaaatgtta agccgttgca 300  
 attggcggca aatgaatcct ctggtttggc ttacagaagt ccagcactta aaaaccagtg 360  
 gaatcttcct gctagttctt cctccactaa tgtggttacc acctttgatg ataacgaaca 420  
 cgtgtcctcc agtgttattg aag 443

<210> 666  
 <211> 304  
 <212> DNA  
 <213> Zea mays

<400> 666

gagactccat atcaacaagt agcatatfff ttactaagaa gaagagaagg gaagattcat 60  
 atttttctgg cttgccaatc tccattatcg aatcatggta ccaacgtgat ggctatgtga 120  
 aatcaatggc tgacctaatt gaaaaagagc tatctgcctt ttccaatcct gaagaggtaa 180  
 tgatatgctt cagtgcacat ggtgtgccac ttacctatgt tcaggatgct ggagatcctt 240

acagagatca gatggaggat tgtatttctg tgatcatggg ggagctgaga tccagaggaa 300  
tctt 304

<210> 667  
<211> 256  
<212> DNA  
<213> Zea mays

<400> 667

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gtatcgaatc atggtagcaa cgtgatggct atgtgaaatc agtggctgac ctgattgaga 120  
aagaggtatc tgccttttcc agtcctgaag aggtagtgat attcttcagt gcacatagtg 180  
tgccacttag ctatgtgcag gatgctggag atccttacag agatcagatg gatgattgta 240  
tttctttgat cgtggg 256

<210> 668  
<211> 263  
<212> DNA  
<213> Zea mays

<400> 668

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agatccttac agagatcaga tggaggattg tattgctttg atcatggggg agttaagatc 120  
aagaggaatc ttaaatagtc acactttggc gtaccagagt cgggtggggc cagttcaatg 180  
gctgaagcca tatactgatg aagttttagt agaacttggc caaaagggtg tgaagagcct 240  
catggctgtt ccagtaagct ttg 263

<210> 669  
<211> 266  
<212> DNA  
<213> Zea mays

<400> 669

agaggttatg atattcttca gtgcacatgg tgtgccactt acctatgttg aggatgctgg 60  
agatccttac agagatcaga tggaggattg tattgctttg atcatggggg agttaagatc 120  
aagaggaatc ttaaatagtc acactttggc gtaccagagt cgggtggggc cagttcaatg 180



gctgaagcca tatactgatg aagtttttagt agaacttggt caaaaggggtg tgaagagcct 240  
cctggctgtt ccagtaagct ttgtga 266

<210> 670  
<211> 276  
<212> DNA  
<213> Zea mays

<400> 670

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tacctatggt caggatgctg gagatcctta cagagatcag atggaggatt gtattttcttt 120  
gctcatgggg gagctgagat ccagaggaat cttaaagtgt cacacttttg cgtatcagag 180  
tcgggtggga ccagttcaat ggctgaagcc atatactgat gaagtttttag tagaacttgg 240  
tcagaacggt gtgaagagcc tcctggctgt tccagt 276

<210> 671  
<211> 307  
<212> DNA  
<213> Zea mays

<400> 671

ctgttattaa accttggtgg tccagagaca cttgacgatg ttcaaccatt tttattcaac 60  
ctatttgctg atccagatat cattcgactc cctaggctct tcaggtttct tcaaagacca 120  
ctggccaaac ttatttctac ttttagagct cctaagagta aagaagggtg tgcttcaatg 180  
gtggtgggtc gccgttaagg aaaattactg atgaacaggc gaatgcttg aagattgccc 240  
tggaagaa aaaattgaac gcaaacatat atgttgggat gcggtattgg taccctttca 300  
cagaaga 307

<210> 672  
<211> 310  
<212> DNA  
<213> Zea mays

<400> 672

ctgttattaa accttggtgg tccagagaca cttgacgatg ttcaaccatt tttattcaac 60  
ctatttgctg atccagatat cattcgactc cctaggctct tcaggtttct tcaaagacca 120

ctggccaaac ttattttctac ttttagagct cctaagagta aagaagggtg tgcttcaatt 180  
 ggtggtgggt cgccgttaag gaaaattact gatgaacagg cgaatgcttt gaagattgcc 240  
 ctggaaaaga aaaaattgaa cgcaaacata tatgttggga tgcggtattg gtaccctttc 300  
 acagaagagg 310

<210> 673  
 <211> 122  
 <212> DNA  
 <213> Zea mays

<400> 673

cccacgcgtc cggtttcaat cgggtggtggg tcaccattga ggaaaattac tgatgagcag 60  
 gcaaatgctt tgaagattgc tctggaaaag aaaaaattga acgcaaatat atatgttggg 120  
 at 122

<210> 674  
 <211> 431  
 <212> DNA  
 <213> Zea mays

<223> unsure at all n locations  
 <400> 674

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 agcttgggca gaaaggggta aagagcctgc ttgctgttcc cattagtttt gttagcgaac 120  
 acattgaaac tttggaagaa atcgatgtgg agtaciaaaga gttggctttg gaatctggca 180  
 tcaagcactg gggacggggt ccagcactag gttgcgaacc cacattcatt tcgcatcttg 240  
 ctgatgctgt tattgaaagc ctaccttatg ttggcgcaat ggcagtttcc aatcttgagg 300  
 ctcggcagtc tctcgtaccc ctcgggagcg tggaggagct gctagcagca tacgactcga 360  
 agcgcgatga gctccctcca ccggtaatcg tgtgggagtg gngctggaca aagagcgcgg 420  
 agacctggaa t 431

<210> 675  
 <211> 298  
 <212> DNA  
 <213> Zea mays

<400> 675

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ccagtggaaat ggctgaaacc gtacactgat gagacaatta ttgagcttgg gcagaaaggg 120  
gtaaagagcc tgcttgctgt tcccattagt ttgttagcg aacacattga aactttggaa 180  
gaaatcgatg tggagtacaa agagttggct ttggaatctg gcatcaagca ctgggggacgg 240  
gttccagcac taggttgcga acccacattc atttcggatc ttgctgatgc tgttattg 298

<210> 676  
<211> 308  
<212> DNA  
<213> Zea mays

<400> 676

gagacgcgtg gcggacgcgt gggcggacgc gtggggccga gttggaccag tggaatggct 60  
gaaaccgacc actgatgaga ctattattga gattgggcag aaaggggtaa agagcctgct 120  
tgctgttccc attagttttg ttagcgaaca cattgaaact ttggaagaaa tcgatgtgga 180  
gtacaaagag ttggcttttg aatctggcat caagcactgg ggacgggttc cagcactagg 240  
ttgcgaaccc acattcattt cgtatcttgc tgatgctggt attgaaacct accttatggt 300  
ggcgcgtg 308

<210> 677  
<211> 174  
<212> DNA  
<213> Zea mays

<400> 677

cccacgcgtc cggcttgggc agaaaggggt aaagagcctg cttgctgttc ccattagttt 60  
tgtttagcgaa cacattgaaa ctttggaaga aatcgatgtg gagtacaaag agttggcttt 120  
ggaatctggc atcaagcact ggggacgggt tccagcacta ggttgcgaaac ccac 174